Mazina'igan
A Chronicle of the Lake Superior Ojibwe
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Tribes and state set 2004 Mille Lacs Lake harvest quotas

Brainerd, Minn.—The 1837 Ceded Territory Fisheries Committee (CTFC), composed of tribal and state biologists, mutually agreed to a harvestable surplus level of 480,000 pounds of walleye for Mille Lacs Lake for the 2004 fishing season during the January 21-22 meeting in Brainerd.

Based on the tribes' five-year management plan for Mille Lacs Lake, the 2004 tribal quota is 100,000 pounds of walleye, which will be allocated among the eight Ojibwe bands. The state allocation is 380,000 pounds of walleye. Last year, state anglers took 67,000 pounds of their available quota.

"It looks like conditions that caused last year's lower harvest will continue throughout the 2004 fishing season," Payer said. "In light of that, we will potentially liberalize our harvest regulation to provide the greatest angling opportunities while staying within the allocation."

Through consensus, the CTFC established the following harvest quotas for 2004 for Mille Lacs Lake: 270,000 pounds for yellow perch; 23,000 pounds for northern pike; 24,000 pounds for tullibee; and 28,000 pounds for burbot.

"The 2004 quotas offer opportunities for sport and subsistence fishing alike, while also protecting the fishery," Payer added. "Calculations were based on the best biological data available for Mille Lacs."

Neil Kmiecik, biological services director for the Great Lakes Indian Fish & Wildlife Commission (GLIFWC), said, "Tribal and state fisheries biologists are dedicated to maintaining and refining a comprehensive and reliable database for shared, treaty fishery lakes and are committed to protecting a healthy and sustainable fishery and fish populations. The bottom line while setting harvest figures is to maintain a spawning stock biomass for each species that guarantees the ability of each species to reproduce."

Tribal spearers and netters should once again expect to see some walleye in their catches that are marked with plastic, spaghetti-shaped tags which stick out from the left side of the fish between the dorsal fin and the tail. These tags will be yellow in color and will have "MN DNR" and a number printed on them. A small percentage of tagged

(See 2004 quotas, page 4)

The 2004 season is almost here. It won't be long before the ice loses its grip on ceded territory lakes, and tribal members will be back on the landings. Above, Robert LaFave, Sr. (left) and Kelly Smith, Fond du Lac, pick walleye from a net at Mille Lacs Lake last year. (Photo by Sue Erickson)

Ice fishermen take on Lac Vieux Desert slush

By Charlie Otto Rasmussen
Staff Writer

Katikegoning, Mich.— More than a week of warm temperatures that spiked to 50 degrees in late February immersed fishing shacks, snowmobiles and a few pick-up trucks in a thick layer of slush on Lac Vieux Desert. Clear sunshine and mild weather also sunk the annual tribal ice fishing tournament.

No, that's not the bait. Tom McGeshick Sr. presents a small perch caught on a wiggler on Lac Vieux Desert in late February. Willard McGeshick jigs for perch in the background. Warm, clear weather made for slushy ice conditions across the Michigan-Wisconsin border lake. (Photo by Charlie Otto Rasmussen)

"We must have gotten 20 inches of snow in the last few weeks and then this warm weather. Access became an issue, and I had to cancel it," said event organizer Paul LaBine.

LaBine and a few others from the LVD and Mole Lake bands still took to the ice on tournament day along with a few dozen state-licensed fishermen, laboring through a network of frozen areas and a quagmire of heavy, water-laden snow to reach fishing spots.

"I figured we'd run the tournament late this year so we wouldn't have to count so many fish," quipped LaBine. "That one year we must have measured 200 northerns alone."

Designed for kids and families, the tournaments are held twice a year and usually include door prizes and awards for the largest fish, LaBine said. On average around one hundred tribal members and people employed by the LVD Tribe turn out for the events. More than half of those are children, LaBine said.

By some sort of consolation, the fishing turned out to be as poor as the ice conditions.

"We're catching bait, that's about it," said a grinning Tom McGeschick as he twisted a two-inch perch from a tiny, pink jig.

Early season ice fishing on Vieux Desert's Rice Bay produced lots of action and some nice walleye from around Thanksgiving to mid-January, LaBine said. He bagged 44 walleyes in that period before the fish moved out into deeper water.

While ice fishing is typically slow in the middle of winter, the fishermen predicted some of the season's best fishing was just around the corner.

"We're getting some perch toward evening, but everything will pick up as we get closer to ice-out," LaBine said. "Crappies and other panfish are usually pretty good out here."

Some fishermen hauling black sleds loaded with gear marched toward shore, a snow ball fight broke out nearby, off to the east a handful of guys were

(See Lac Vieux Desert, page 5)

2003 Manoomin season a good one

But what will the 2023 harvest be like?

By Peter David
GLIFWC Wildlife Biologist

Odanah, Wis.—Preliminary results of the 2003 Wisconsin manoomin (wild rice) harvest survey are confirming what many pickers already knew: it was a pretty darn good year. Survey results indicate the state-licensed ricers picked nearly 50,000 pounds of green (fresh) rice last year, while the tribal off-reservation harvest exceeded 27,000 pounds. (Tribal on-reservation harvest—substantial at some reservations—is not measured in this survey.) These are the highest harvest estimates since the bumper crop that was enjoyed by pickers back in 1997.

The Great Lakes Indian Fish & Wildlife Commission (GLIFWC) has conducted the Wisconsin wild rice harvest survey every year since 1987, with the exception of 1988. The Wisconsin Department of Natural Resources (WDNR) cooperates with the survey by providing the names and addresses of individuals who purchase state ricing licenses.

The survey has shown that wild rice harvest, like the annual plant itself, can vary greatly from year to year. The 1997 combined state and tribal harvest estimate exceeded 110,000 pounds, more than five times the level estimated for the dismal 1991 season.

Generally, as the crop goes, so does the harvest, although the relationship is not quite that simple. A good crop does not always equate to rice in the canoe, as rain or high winds during the harvest season may keep a good harvest from being realized. At the other extreme, a good crop can also trigger an interest in harvesting in occasional or first time ricers, leading to an even greater harvest than might have been expected—an effect most noticeable among state-licensed ricers. In 2003, for example, state license sales reached 621, over 40% higher than for 2002, and the highest figure in recent history.

Fortunately, high manoomin harvests do not need to trigger a concern regarding possible over-exploitation of the resource. Regulations limit wild rice harvesting to the traditional hand-harvesting techniques, which are inherently inefficient, taking only about 10-15% of the annual production, even with intensive, repeated effort. This ensures that ample seed is left to seed the bed and feed the ducks, coots, rails and other species that partake of manoomin's generous gift.

The harvest survey also shows that ricers are enjoying some new opportunities brought about through the cooperative, interagency effort to restore wild rice abundance in the ceded territory. The most heavily harvested off-reservation bed in the state last year was a waterfowl impoundment that had been seeded in cooperation with the Wisconsin DNR. About a dozen other sites seeded in the restoration effort turned up in the survey as well.

The survey helps biologists to understand not only the harvest, but the harvesters as well. For example, it displayed some marked differences between the hypothetical "average" state and tribal ricer, differences that reflect the long, cultural tradition of ricing among the Ojibwe.

In 2003, state ricers had an average of eight years of ricing experience,

Today, Ojibwe people continue to hand-harvest manoomin (wild rice), a culturally important food.

and half had four years or less (a figure somewhat higher than average due to the "good crop" effect mentioned above). Tribal ricers in comparison had an average of 27 years of experience. Although ricers are not asked to provide their ages, it is likely that part of this experience difference results from the fact that tribal members tend to be introduced to ricing at an earlier age. Thus a thirty year-old state ricer may only have a few years under his or her belt, while the tribal counterpart may be well into their second decade of picking.

Each one of those years will also, on average, reflect more time in the rice beds for the tribal member, who tends to go ricing more often. In 2003, for example, "Joe Average" tribal member made 5.3 ricing trips, double the number of his state counterpart. And it appears that experience pays off: tribal members gathered an average of 55 pounds of green rice per trip, versus 34 for state licensees. Similarly, experienced state pickers outdid their novice fellows, both in the number of trips made and the amount of rice gathered per trip.

These figures may also raise a flag of potential concern for future generations of tribal manoomin harvesters, as there appears to be relatively few new tribal pickers coming into the ranks. If young pickers are doing their ricing on the reservations, they would not show up in this survey, but at least among off-reservation ricers, the percentage of new recruits is very low, thus raising the question of what the harvest figures for the 2023 season might look like. So, next fall when the seed heads are turning brown and the ducks and rails are moving into the rice beds, and you're wondering if your pushpole is good for another year, remember to take a kid ricing!

GLIFWC would like to thank all the harvesters who cooperated with the annual harvest survey; your information makes an important contribution towards the management of this invaluable resource.

Wild turkeys released in far northern Wisconsin

By Charlie Otto Rasmussen, Staff Writer

Ashland, Wis.—Once a rare bird in the Wisconsin ceded territory, wild turkeys have steadily edged north over the past decade. Following a series of releases in early March, the big birds leap-frogged into far northwestern Wisconsin in a project to test their hardiness at high latitudes.

Wild turkey gobbler. (Photo by NWTF)

With funding in large part by the National Wild Turkey Federation (NWTF), the Wisconsin Department of Natural Resources released 164 birds at six sites between Ashland and Solon Springs. State turkey trappers captured the birds in central Wisconsin using rocket-fired nets at established bait stations. After the birds were picked from the nets and placed in individual boxes, local NWTF volunteers trucked them as far as 200 miles to the release sites.

Tribal members, particularly those from Red Cliff, Bad River and Lac Courte Oreilles, may be well positioned to take advantage of harvest opportunities in several years if the birds adapt to the new areas.

"Wild turkeys continue to surprise us with their hardiness," said Peter David, Great Lakes Indian Fish & Wildlife Commission (GLIFWC) biologist. "If these birds can establish themselves along the agriculture-forest interface in Bayfield and Douglas Counties, there may eventually be some hunting opportunities on public land. Right now we're interested to see how they handle some of the hurdles like deep snow and predation."

Currently, most treaty hunting for wild turkeys occurs in Burnett County. Ojibwe hunters harvested a total nine turkeys in the 2003 spring season.

Small, experimental populations exist near Mille Lacs and Lac du Flambeau where wildlife officials monitor how wild turkeys are faring in northern habitat that contains little or no farming activity.

In recent years, turkeys have shown up in places like the Apostle Islands, northern Bayfield County and the Bad River reservation, but biologists generally regard these as game farm birds, raised in captivity and released illegally. Wildlife professionals frown on such releases because game farm birds are genetically inferior and more susceptible to disease than truly wild birds.

"Game farm turkey releases can work against the success of the current release of wild birds by diluting their genetic stock," David said.

The Wisconsin treaty spring turkey hunting season runs from April 14 to May 22. In addition to a valid small game hunting permit, tribal members must obtain harvest tags from a GLIFWC warden or tribal conservation department before going hunting. All treaty-harvested turkeys must be registered. In addition, hunters should refer to individual tribal ordinances for additional hunting restrictions or requirements.

Wildlife biologists estimate the statewide wild turkey population at more than 320,000 birds. Wisconsin currently ranks as the fourth best turkey hunting state in America.

On the cover

Mike Schrage, Fond du Lac wildlife biologist and a bull moose captured and radio-collared in early February 2003 (see story on page 8). (Photo submitted by Fond du Lac Natural Resources Department.)

Native Americans concerned with threat to cultural heritage

By Bill Thornley
Spooner Advocate

Lac Courte Oreilles, Wis.—"Be humble with what the Great Spirit has given us," advised Jerry Smith, a Native American spiritual leader and storyteller from the Lac Courte Oreilles (LCO) reservation near Hayward.

His words opened a conference at LCO College entitled *"Wild Rice and Genetic Engineering: The social, ethical and economic impact on tribal cultures."*

But people are not being humble, he continued. And because of that, people are eating a lot of unhealthy foods. Of particular interest to Native Americans is what is being done to natural wild rice.

Natural wild rice is a wild aquatic grass—or as the Ojibwe refer to it, manoomin—that is, free of genetic and scientific modification, and it is harvested in its natural lake and stream environment.

The U.S. Department of Agriculture first began research on wild rice in 1906, and by the 1950s the University of Minnesota began domesticating wild rice. A wild rice "paddy industry" grew from up there in Northern Minnesota and parts of Canada. Paddy wild rice is a hybrid grain made through cross-breeding. It is designed to be cultivated in farm paddies and mechanically harvested, unlike the traditional Native American method of gathering by canoe.

Native Americans are concerned that domesticated wild rice poses a threat to the natural wild rice beds due to "pollen drift" between domesticated stands and natural stands. Another major concern is genetic engineering, the act of extracting and implanting genetic materials from one organism to another to produce a new or modified organism. Mess with Mother Nature enough, they say, and soon the sacred, original wild rice will be lost.

"Years ago the people would assemble at the ricing lakes," Smith explained to a large crowd assembled at the James "Pipe" Mustache Auditorium at LCO College. "Wild rice is a sacred plant. It is a gift from the Great Spirit. There are many rules and restrictions to it because it is sacred.

"Years ago, Native people respected wild rice as sacred, a gift from the Great Spirit. At the rice lakes older people were selected as rice chiefs. There were feasts and ceremonies. The feasts were for the rice spirits, and tobacco was left at the edge of the lakes, as thanks.

"Rice chiefs had an important job to keep people from going out too early when the rice was not yet ready. Rice chiefs had absolute authority on the rice lakes, even over tribal chiefs. Each family would have a feast to give thanks for a bountiful harvest. They would feast wigwam to wigwam, and people left all full and happy.

"Wild rice is a very important thing to us. That is what the Indian people have forgotten, and that is why we do not have the wild rice we used to.

"Indian people would fill a canoe with wild rice and sink it into a pit. They were always storing it. If kept dry, wild rice will last forever. But spiritual rules go with wild rice, and our people don't know them anymore. Wild rice attracts wildlife and fish, and it cleanses the water. It is even used for medicine. But the DNR took over rice lakes in the 1930s and opened up the lakes (for harvesting) too early."

They also, said Smith, got greedy about how much rice was taken.

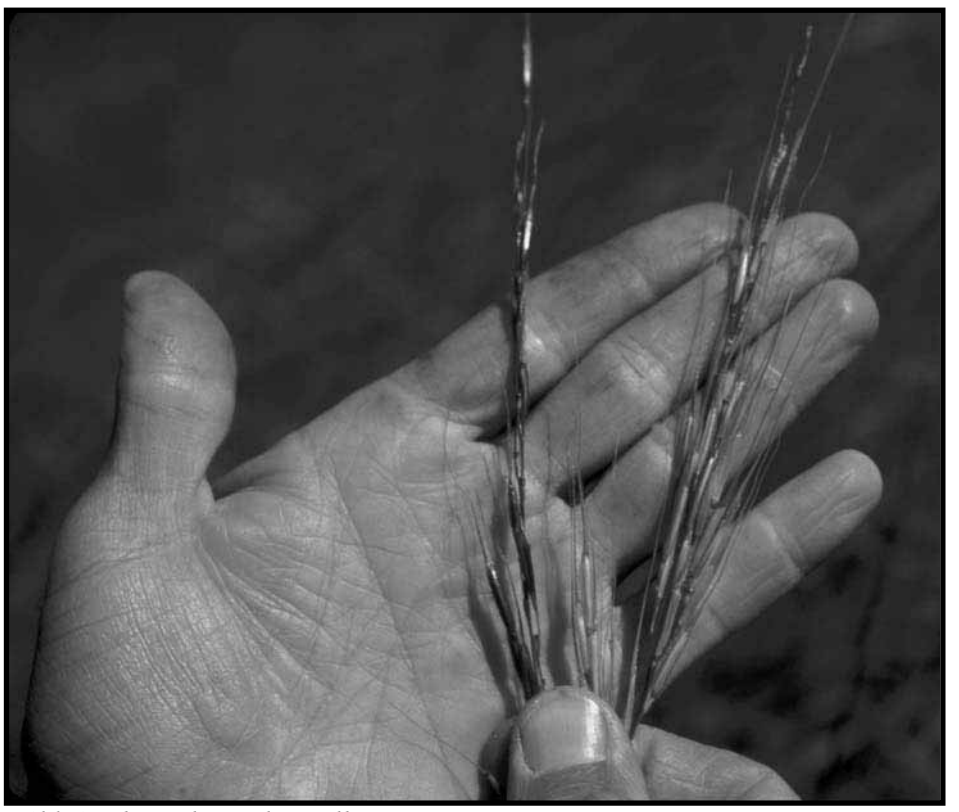
"People would put big, high boards on the side of their canoes," said Smith. "They would get more rice, but there was nothing falling back into the lakes to re-seed the beds. There is an actual spirit that takes care of wild rice. We should not change things. Everything has been laid out like on a big blanket, a big feast. We must be thankful. Indian people have forgotten this."

Also at the conference was Winona LaDuke, a former Vice Presidential candidate of the Green Party and a member of the White Earth Reservation in Minnesota. A 1982 graduate of Harvard, LaDuke serves as board co-chair for the Indigenous Women's Network. And she is also a mother, worried about what her kids may be eating if things keep going the way they are.

"Manoomin was given to us by the Creator," she began. "It defines us. You can pretty much buy everything in a store, but you cannot buy a way of life. As Anishinaabe people, we have always had wild rice. The process of colonization has impacted Native People. It is the process of consuming another culture—they tried to make us into brown-skinned, white people. Anthropologists. They said the feasts, harvests, prayers and dances for wild rice were not very productive—they didn't get it. What we're looking at today is because of this different world view."

LaDuke said big changes began to take place in the 1950s when the University of Minnesota began experimenting with wild rice.

"The university started to take wild rice so they could figure out how to domesticate it," she said. "Wild rice grows in beds all over, but they wanted to make it grow in an orderly fashion. They came to our communities and bought rice. They spent a lot of time trying to grow the seed in dyked rice paddies. They wanted to make it grow in a short period of time and harvest it like they were harvesting wheat. They developed eight different varieties. It's not wild rice; it's paddy rice. They created a rice with a harder shell so it could be harvested with a combine, but it is a totally inferior product. It doesn't cook right. It doesn't taste right. So don't call it wild rice; it misrepresents the product."



Wild rice kernels on the stalk.

Yet having created a changed product, the wild rice companies still wanted the image of a Native American product. Packages of paddy rice were soon in distribution featuring a picture of two Indians in a canoe harvesting the old-fashioned way. This infuriated those who had fought to preserve that practice, and a lawsuit was brought in 1988, resulting in a settlement, and the elimination of the two-Indian logo.

"Ojibwe people can't compete with a combine," said LaDuke. "It's hard work to harvest wild rice. Combined rice, however, can be sold cheaper, so they impacted and undercut our communities. Within a few years California became the biggest wild rice producing state. Today, three quarters of all wild rice is produced in California.

"At the turn of the millennium, the University of Minnesota announced they'd broken the DNA code on wild rice. A scientist named Ron Phillips figured out how to map the DNA of wild rice. Now they have something called genetic modification, taking or adding genetic materials in certain combinations to change or modify an organism. DNA is like an instruction manual—genes from trout have been stuck in tomatoes because they are cold resistant and meatier. They've even put human DNA in pork. That kind of borders on cannibalism, I think. Who told them they could do this? They have a set of instructions given by the Creator, and they want to change the instructions and play God."

The result, said LaDuke, has been the production of food—not just wild rice—vastly different from the healthy natural foods people used to eat.

"You want to eat processed food—get diabetes. Eat real foods and get well," she said. "The latest thing they're doing is putting antibiotics in white rice. About 90 percent of our processed foods have something genetically modified in them. You don't know what you're eating. We oppose any genetically modified wild rice coming into out area. The potential to contaminate our wild rice stands is significant, and we're trying to keep them from bringing it in."

Natural wild rice beds, said LaDuke, could easily be contaminated by pollen from the modified stands nearby. But that, she said, would not be the way most contamination would occur.

"If it got in here, worry about the ducks," she said. "That's what moves it, and they can't control that. Something as simple as ducks."

Patents are a grant made by the government to an inventor, assuring the sole right to make, use, and sell the invention for a certain time period. Patents, said LaDuke, are now being placed on genetically engineered seeds.

"Our position is that patents are not for life forms," she said. "It is unethical. Patents are property rights. If something patented in a field drifts on the wind into your field, you can be sued for stealing it. It has happened.

"The Minnesota Cultivated Rice Council found out wild rice is good to combat cholesterol—we knew that! Eat wild rice, be healthy. They called it 'astonishing.' What we say is eat more rice, eat 'real' rice.

"Most European countries are opposing genetic modification, while the US is pushing it," continued LaDuke. "We value our own food. We want to eat safely. We're looking at continuing the opposition, at banning genetically modified seeds from coming in. We call the companies that are trying to patent and alter everything 'bio-pirates.' They're taking something that belongs to everyone. You're looking at globalized food systems which are controlled by fewer and fewer interests. We're going to stand our ground. We say this is sacred, and keep your hands off our rice."

Anishinaabeg intents and rights

1. Wild rice is central and sacred to the heart and spirit of the Anishinaabeg and other Indigenous peoples.
2. The Anishinaabeg territories are the center of origin for natural diverse original strains of wild rice.
3. Wild rice is an essential part of Anishinaabeg sustenance and survival, and its integrity is threatened by coorporate control and genetic engineering.
4. The right and responsibility to protect wild rice for future generations is an inherent right of the Anishinaabeg and is further protected by our self-governance, sovereignty and treaty rights.

(Reprinted from the White Earth Land Recovery Project website.)

No sign of CWD in northern Wisconsin

Tribes push for preventative measures

By Jonathan Gilbert, Ph.D.
GLIFWC Wildlife Section Leader

Odanah, Wis.—During the 2003 treaty deer hunting season tribal members were given the opportunity to submit deer heads for testing for chronic wasting disease (CWD). This is the second year of tribal testing in northern Wisconsin, central Minnesota and western Upper Peninsula of Michigan.

In 2002 more than 300 samples were submitted, and during 2003 around 100 samples were submitted. None of the submitted samples have turned up positive. During 2002 the Wisconsin Department of Natural Resources (WDNR) also tested deer from the Wisconsin ceded territories, and none of these samples were positive either. Thus, we can be fairly certain (more than 95% certain) that CWD is not present in the ceded territories of Wisconsin.

This is good news for northern deer hunters. However, it does not mean that we can rest on our laurels. CWD spread from western states, like Colorado, to Wisconsin, so it is not impossible for it to spread from southern Wisconsin to the north. The spread of CWD around the country from a couple of western states has occurred too rapidly, and the disease has spread too far for it to have happened without human assistance. People are responsible for the rapid and far-flung spread of this disease by the transportation of captive deer and elk to and from deer/elk farms. In order to keep CWD from infecting deer in the ceded territories, the transportation of infected cervids (members of the deer family including elk) from place to place must be stopped.

In Wisconsin, and other nearby states, the regulation of captive cervids falls primarily to the Department of Agriculture, Trade and Consumer Protection (DATCP). The tribes have asked who is responsible for ensuring that CWD is not spread from captive deer/elk to wild deer or elk in the north. This is a shared responsibility between the WDNR and DATCP, with DATCP responsible for the animals on the farm and WDNR responsible for the facilities (fencing and housing of animals).

The tribes have established a working relationship with WDNR over the years in response to the Voigt Decision. Yet no such relationship exists between tribes and DATCP. Recently James Schlender, Great Lakes Indian Fish & Wildlife Commission executive administrator, wrote to DATCP Secretary Nilsestuen and invited him to meet with the tribes and the Voigt Intertribal Task Force (Task Force). This is the first step in establishing an agency-to-agency relationship in an attempt to work together to ensure that CWD does not spread north.

Ayaabe (buck).

The Task Force would find it particularly helpful to discuss the following:

✖ DATCP's role regarding CWD prevention, control and eradication from captive herds;

✖ DATCP's efforts and plans to protect against the introduction and spread of CWD beyond the farms where animals already have tested positive;

✖ The possibility of CWD spreading to the ceded territories and what might be the best approach to prevent this from happening;

✖ Effective methods for ensuring that captive animals and wild animals are not able to intermingle, either because captive animals escape from licensed farms or because wild animals enter farms;

✖ The types of regulatory controls that might be necessary regarding the movement of captive animals into the ceded territory, whether from sources outside of Wisconsin or from other licensed farms within the state; and

✖ The relationship between DATCP's responsibilities and those of the WDNR, and how the two agencies might best collaborate to prevent the spread of CWD from captive herds to wild herds.

The tribes and the Voigt Intertribal Task Force remain committed to protecting wild deer populations in the ceded territory. They look forward to a dialogue and a partnership with DATCP and WDNR to help achieve this goal.

2003 Wisconsin/Minnesota off-reservation treaty deer hunt by tribal registration station
Final harvest figures

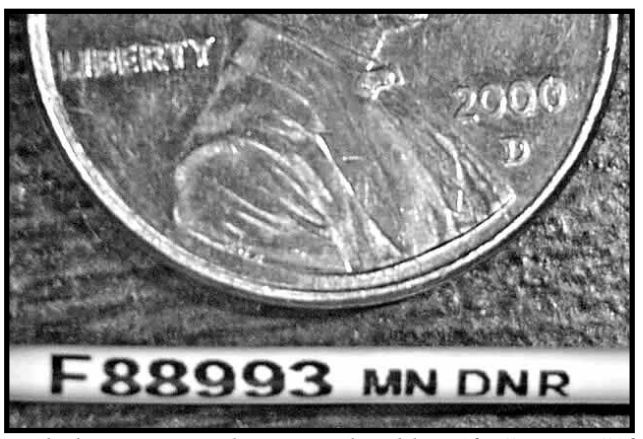
Registration Station	Antlerless	Antlered	Totals
Bad River	134	166	**300**
Lac Courte Oreilles	299	379	**678**
Lac du Flambeau	199	364	**563**
Mille Lacs	60	75	**135**
Mole Lake	70	90	**160**
Red Cliff	239	231	**470**
St. Croix	185	258	**443**
Totals	**1,186**	**1,563**	**2,749**

2004 Mille Lacs Lake quotas

(Continued from page 1)

fish will be double-tagged to help determine tag loss rates.

Tribal creel clerks have been instructed to remove all tags encountered during the spring 2004 harvest monitoring. Any tags from speared or netted fish that may have been missed during harvest monitoring should be removed and given to any tribal biologist, creel clerk, or warden.



Tribal spearers and nettters should notify GLIFWC if tagged walleye are caught. (Photo by Nick Milroy)

Tags may be sent to Inland Fisheries Biologist, Nick Milroy, GLIFWC, P.O. Box 9, Odanah, WI 54861. Tags can also be reported by phone (715) 682-6619 or email (nmilroy@glifwc.org).

Makwa (bear).

2003 Wisconsin off-reservation treaty bear hunt by tribal registration station
Final harvest figures

Registration Station	Male	Female	Totals
Bad River	5	1	**6**
Lac Courte Oreilles	4	2	**6**
Lac du Flambeau	1	6	**7**
Mole Lake	8	3	**11**
Red Cliff	8	2	**10**
St. Croix	7	7	**14**
Totals	**33**	**21**	**54**

Grant funds UP fish advisory re-education program

Sault Ste. Marie, Mich.—A new program called "Eat More Fish But Choose Wisely" will help Upper Peninsula residents make the safe, smart choice to include Great Lakes fish in their diets.

The Health Services Division of the Inter-Tribal Council of Michigan has been awarded a $150,000 grant from the Agency for Toxic Substances and Disease Registry to fund a fish advisory re-education program that will positively impact both tribal and non-tribal residents of the Upper Peninsula.

ITC will work with the Chippewa Ottawa Resource Authority (CORA) and Inter-Tribal Fisheries and Assessment Program (ITFAP) to ensure that the fish contaminant information is up to date for the fish species most often eaten in the Upper Peninsula.

Advisories warning residents to greatly reduce their intake of fish caught in areas of the Great Lakes have resulted in many residents altogether avoiding intake of this vital source of healthy Omega-3 fatty acids and proteins. This trend toward eliminating local fish from the diet is of particular concern among Michigan Indian tribes for whom fishing is not only a primary source of income and a foundation for a healthy diet but; it also plays a key role in the traditions of family and community life.

Warnings against eating fish in the Great Lakes are based on a concern about the levels of methyl-mercury and PCBs present in the fish population.

Both pollutants pose serious health risks when ingested in high amounts, the greatest risk being to children born to mothers who eat large amounts of fish containing these pollutants. Current advisories do indicate that certain kinds of fish taken from "safe" areas of the lakes and consumed in specific quantities are safe for the general population. However, confusion over what exactly constitutes a safe amount has caused many individuals to stay away from eating fresh fish altogether.

ITFAP will test fish such as walleye, whitefish and lake trout to determine current levels of contaminants in the waters of the Great Lakes surrounding the Upper Peninsula. ITFAP has been testing commercial tribal catch since 1991 and now has the most extensive database on contaminants in commercial fish in the Great Lakes.

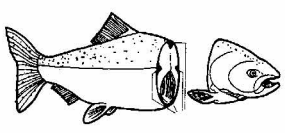
While concerns about eating too much fish from specific areas are very real, residents of the Upper Peninsula, in general, and in the American Indian population, specifically, may be putting themselves at a greater risk nutritionally by eliminating fish from their daily diet.

Recent studies show that the biggest health concerns for tribes in Michigan are diabetes and high blood pressure. Fish is a source high in the Omega-3 fatty acids and selenium, believed by many to decrease the risk of heart disease associated with these health concerns.

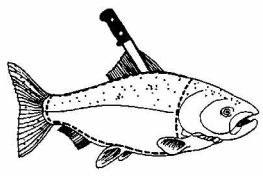
Funds from the grant, awarded to the Inter-Tribal Council in September, will be used to develop advisories and outreach activities that stress the importance of including safe amounts of fish from the Great Lakes in a healthy, traditional diet.

CLEANING GREAT LAKES FISH

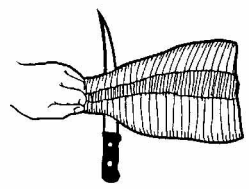
1. Low levels of halogenated hydrocarbons tend to accumulate in fatty parts of the fish and should be removed.



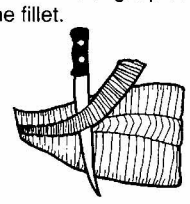
2. Carefully fillet the fish with a sharp, long-bladed knife.



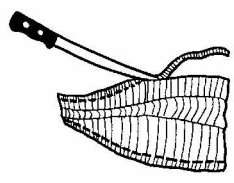
3. Skin the fillets, holding the tail section firmly. Run the blade between the skin and the meat along the table surface.



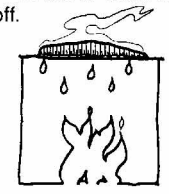
4. Trim fat along top center of the fillet.



5. Trim fat along edges of fillet.



6. Bake, broil or barbecue fish on a rack to allow fat to drip off.



(Reprinted from Food Safety News, a publication of the Michigan State University Cooperaative Extension Service.)

Larry Brooke, (right) Lake Superior Research Institute chemist, tests for mercury levels in Lake Superior fish. In the 1999 study none of the Lake Superior fish tested showed methylmercury in excess of the US FDA's limit for commercial sales of 1000 ppb (1.0 ppm). (Photo by Charlie Otto Rasmussen)

Tribes declare for 2004 spring spearing in Wisconsin

Odanah, Wis.—In Wisconsin, the Red Cliff, Bad River, Lac Courte Oreilles, Lac du Flambeau, Mole Lake/ Sokaogon, and St. Croix bands declared walleye and muskellunge harvest in 306 lakes plus five lake chains. Out of the safe harvest figure of 95,226 walleye in ceded territory lakes, the bands declared 43,315 walleye for the 2004 spring season.

Lakes were also declared for muskellunge. The combined muskellunge declaration is for 1,509 muskellunge from a safe harvest total of 4,442 muskellunge in ceded territory lakes.

In 2003 a total of 399 tribal members participated in the traditional, spring spearing season. Spearing for walleye occurred on 166 lakes, and walleye were harvested from all except three lakes. A total of 28,063 fish were taken with 98% of the catch (27,502 fish) being walleye. Numbers of other gamefish harvested were 222 muskellunge, 196 bass, and 22 northern pike. Average lengths were 15.6 inches for walleye and 38.9 inches for muskellunge.

This spring season will mark the twentieth consecutive treaty, spring spearing season.

Lac Vieux Desert ice fishermen

(Continued from page 1)

high stepping through the watery sludge, rubbing their chins and kicking tires as they pondered how to free a sunken pick-up truck. But there wasn't much happening under the ice.

The men swapped stories from other pursuits of the recent past—the big buck that got away, the time McGeshick dropped two eight-pointers within 15 minutes, duck hunting on Misery Bay just over the peninsula of land to the west, and the ebb and flow of wild rice growth on Vieux Desert's sometimes prolific beds. Severe drought conditions in 2003 contributed to low water levels and a reduction in manoomin. Ricers found harvestable wild rice, but were required to transport undersized canoe loads back to shore in order make it back to the boat landing across shallow areas of the lake.

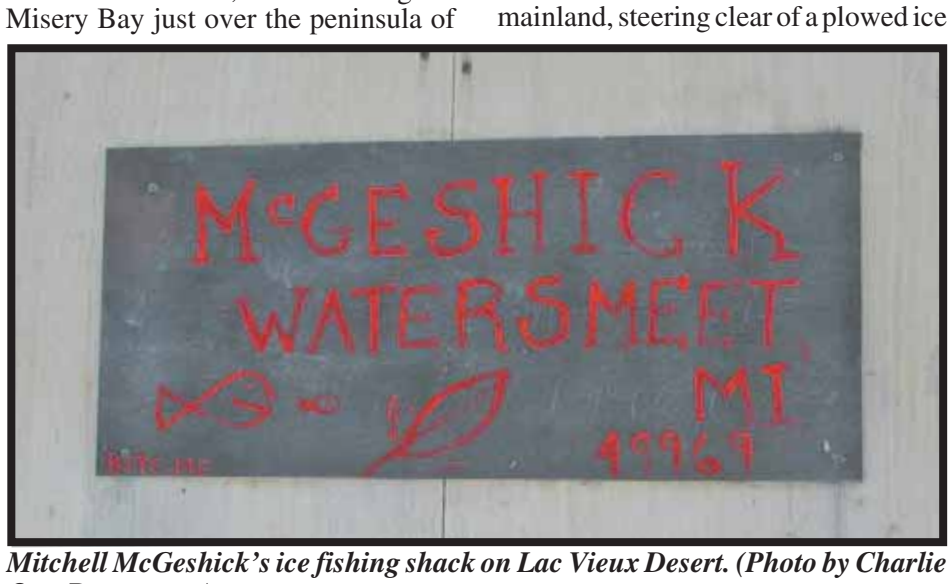
A snowmobile raced from the mainland, steering clear of a plowed ice road that had become an open-water canal several feet deep. LaBine pointed out a new vacation home under construction on an island where the road ended. The contractor would need a flatboat to use the passageway now.

The conversation turned toward the coming spring and the spearing season. Fishing on Lake Gogebic, Upper Michigan's largest lake, had been pretty good but variable last year, and the fishermen hoped to time their trip just right this year. McGeshick said some of the island shorelines of Lac Vieux Desert were among his favorite places to fish in spring. The tribe has generally made low harvest declarations on their homeland lake; however, seeking to increase walleye densities.

"We don't take many fish from this lake, we want to get that population up there, "he said.

A few tribal members headed back to the mainland where the old village, Katikegoning, and pow wow grounds are set back from the shoreline. Others were content tending a handful of tip-ups and jigging for perch.

It was a brilliant winter day. And despite the messy ice conditions and slow fishing, it was good to be out.



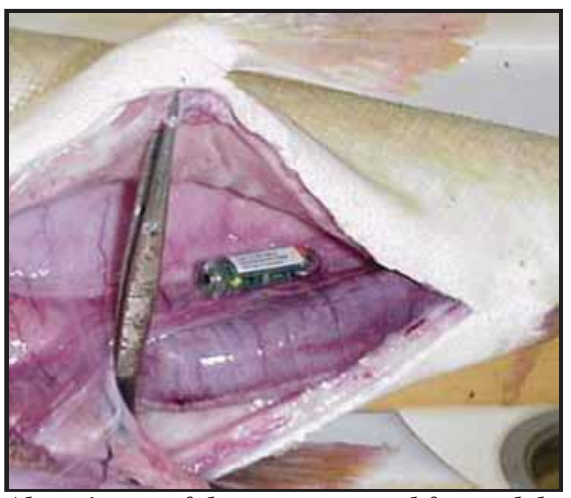
Mitchell McGeshick's ice fishing shack on Lac Vieux Desert. (Photo by Charlie Otto Rasmussen)

Three year thermal/ depth study on lake trout wraps up

Keweenaw Bay, Mich.—A three year project undertaken by the Great Lakes Indian Fish & Wildlife Commission's (GLIFWC) Great Lakes Section and funded by the U.S. Fish & Willdife Service (USFWS) Great Lakes Fish and Wildlife Restoration Act is coming to conclusion. This project collected information on the depth and temperatures used by lake trout in Lake Superior through the use of archival tags.

Fourteen of 124 lake trout implanted with depth and temperature archival tags were recaptured after an average of 372 days at large. Each tag holds up to 37,000 records of depth and temperature which are taken every 15 seconds and then averaged over a period of time, dependent upon how long the tag is "at large"—that is how long the tag is in the belly of a Lake Superior lake trout.

The first fish captured after being at large 40 days had depth and temperature recordings averaged over every four minutes, while the last fish captured after being at large 719 days had a depth and temperature recordings averaged every 60 minutes. Overall, the average temperature encountered by the 14 recaptured lake trout was 4.7º C (40.4º F), and the average depth was 28.4 meters (93.1 feet). Of particular interest to Bill Mattes, Great Lakes Section Leader, was the speed at which individual lake trout traveled from one depth to another. For instance, on December 6, 2001 at 4:12 p.m. one fish descended to 250 feet, and by 4:20 p.m. it had ascended to 51 feet, followed by a decent to 261 feet by 4:27 p.m.



Above is one of the tags recovered from a lake trout. Each tag holds up to 37,000 records of depth and temperature. (Photo courtesy of Shawn Sitar, MiDNR)

Mattes presented findings and provided data to the Lake Superior Technical Committee at their bi-annual meeting in Ashland, Wisconsin on January 13, 2004. The temperature data will be used to fill an important data gap in bioenergetics models of both lake trout and sea lamprey and to refine stock assessment models. The depth data gathered will be used to better understand the ecology of lake trout and to draw insights into possible interactions between fish species, predator-prey relationships, and the interactions between lake trout and the sport and commercial fisheries.

Increased sea lamprey control effort in Lake Superior slated for 2004

By Bill Mattes
GLIFWC Great Lakes Section Leader

For the 17th year GLIFWC's Great Lakes Section staff cooperated with the U.S. Fish and Wildlife Service's Sea Lamprey Control Program to monitor sea lamprey populations along Lake Superior's south shore.

From late April to early July 2003 four Wisconsin and three Michigan rivers were monitored with a total of 2,587 lampreys being captured.

Specific objectives of the Great Lakes Section's lamprey trapping program are to monitor the upstream spawning movements of sea lamprey, to collect data on the biological characteristics of spawning sea lamprey (sex, length and weight), to estimate the number of lamprey spawning in each tributary, and to reduce the spawning potential of sea lamprey by removing a portion of the run.

The data collected during the annual population estimates contribute to a lake-wide management plan to control and reduce lamprey populations, which is lead by the Great Lakes Fishery Commission (GLFC).

At the Lake Superior Technical Committee (LSTC) meeting in January, members were made aware that GLFC increased the base level of control in the Great Lakes by 15% annually. Since the early 1980's there has been a declining trend in treatment effort on Lake Superior and an increasing trend in numbers of spawning lamprey. However, considerable control effort was added to Lake Superior in 2004.

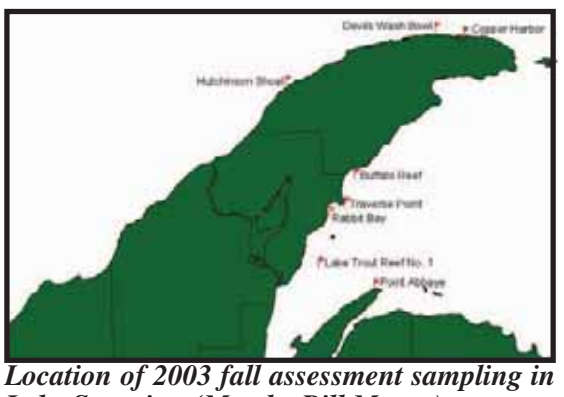
Also, at the LSTC meeting, GLFC representatives suggested an overall goal to reduce sea lamprey abundance in Lake Superior to roughly 39,000 spawning adults annually, abundances that have not been seen since 1994. This is equivalent to a sea lamprey marking rate of 5 marks/100 fish observed.

The Fish Community Objective for Lake Superior sea lamprey is "to suppress sea lamprey to population levels that cause only insignificant mortality on adult lake trout" with the management objective being "to suppress populations until annual lamprey-induced adult lake trout mortality is essentially insignificant (< 5%)."

GLIFWC's biological crew battle cold and wind during fall lake trout & whitefish spawning assessment

By Bill Mattes, GLIFWC Great Lakes Section Leader

Cold and high seas in October and November 2003 challenged GLIFWC's Great Lakes Section personnel as they tagged spawning concentrations of lake trout and whitefish on eight reefs. This is done to identify discrete stocks and to determine their distribution, relative abundance and biological characteristics in management units of the 1842 Treaty ceded area within Michigan waters of Lake Superior.



Location of 2003 fall assessment sampling in Lake Superior. (Map by Bill Mattes)

A total of 18,000 feet of gill net was lifted during the 2003 fall assessments, with up to 2,250 feet of gill net being set on each individual reef during one-night sets. Fish captured in good physical condition were tagged with consecutively numbered Floy tags and released after measurements of length, fin clip, lamprey marks, and sex were recorded. Crew also recorded weight, stage of maturity, and took otoliths or scales. The otoliths and scales will be examined to determine the age of the fish.

In addition, eggs were kept and counted from dead female fish to determine fecundity—the number of eggs per female by size. This is used to determine the reproductive potential of the population.

Tribal commercial fisherman Joe Newago assisted the assessments by conducting four net-lifts during November when the weather became too severe for GLIFWC's 25' Ojibwa Lady. In all, a total of 381 lake trout and 267 whitefish were captured with 179 lake trout and 182 whitefish being released. Rough weather this season led to a higher than normal number of dead lake trout. However, nearly half of the dead fish are being examined for contaminants under an Environmental Protection Agency's Environmental Justice grant.

These annual assessments provide a data base used by biologists to make management recommendations on the fishery. The information allows fisheries biologists to track trends in numbers of spawning fish by stock over time.

Biological information such as growth, mortality and movement between stocks is also obtained and gives insight into how fishing affects various stocks of fish.

Fisheries Aide Daysha Heffner holds a lake trout captured during GLIFWC's fall assessments in Michigan waters of Lake Superior. (Photo by Nathan Bigboy)

Spray from a wind-tossed Lake Superior quickly turned to ice as it hit the jacket of Nathan Bigboy, Administration for Native Americans fisheries technician, during fall lake trout and whitefish assessments. (Photo by Bill Mattes)

Invasive, exotic plants

Common buckthorn among the top forest weeds

By GLIFWC Staff

Odanah, Wis.—While there are several hundred introduced plant species now thriving within the boundaries of the ceded territories, some of them are more worrisome than others because they are not only exotic, but also invasive, says Miles Falck, Great Lakes Indian Fish & Wildlife (GLIFWC) wildlife biologist. This means that the introduced plants spread into natural habitats and choke out native plants.

Mazina'igan will be featuring an invasive plant in each upcoming edition to help the general public recognize these invaders on the landscape. Of course, early detection goes a long way in preventing their spread. Once entrenched, many of these plants can be very difficult or impossible to eradicate. Among the major forest weeds is common buckthorn—the invasive plant featured in this edition. For more information on invasive species, check out GLIFWC's website at www.glifwc.org/epicenter.

Common buckthorn origin & history

Common buckthorn (*Rhamnus cathartica* L.) is native to Europe, western Asia, and northern Africa. It has long been planted as an ornamental and for hedgerows. In Wisconsin it was used as a hedgerow plant as early as 1849. In the early 1900s common buckthorn was promoted as a shelterbelt species on the northern Great Plains, until the realization that it was the alternate host of oat stem rust. By 1916 it was reported as locally common in southern Michigan, indicating that it was already naturalized there by that time.

Today buckthorn has escaped cultivation across much of the northern US and adjacent Canada. It is well-established in the upper Great Lakes region, especially around cities and towns. It is considered "ecologically invasive" in Wisconsin, "highly invasive" in Upper Michigan, and a "restricted noxious weed" in Minnesota.

Characteristics

Common buckthorn is typically a shrub or small tree, growing to 20 feet tall. The leaves are broadly oval, hairless, 1.2 to 2.4 inches long and usually about half as wide, with 2-4 pairs of upcurved veins on each side They may be rounded or pointed at the tip. The leaf margins are bordered with small teeth. Leaf arrangement on the twigs varies from opposite to almost opposite to occasionally alternate. The twigs have grey-brown bark and scaly buds and are often tipped with a short thorn.

Common buckthorn is dioecious, with male and female flowers on separate plants. Small, inconspicuous, greenish-yellow flowers are produced from mid-May through June. These flowers appear in clusters of 2-6 at the bases of some of the leaf stalks.

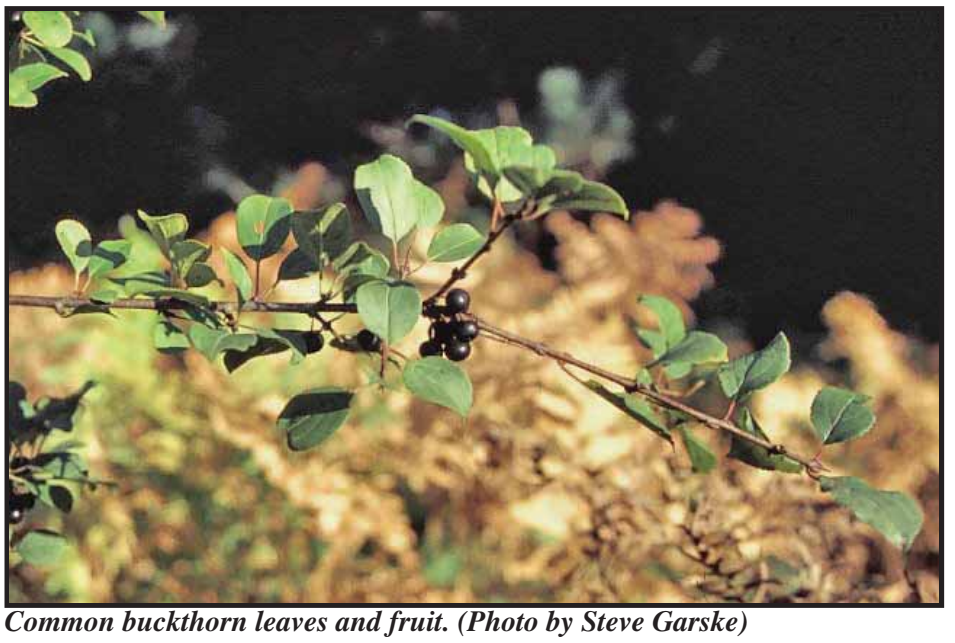
After flowering, the female plants produce clusters of berry-like, deep purple to blackish fruits, each typically containing four seeds. These fruits have strong laxative properties (hence the species name, "cathartica"). The leaves of common buckthorn stay green until late in fall, weeks after most native species have lost their leaves. They turn yellow before falling.

Similar species

Another invasive buckthorn, Eurasian glossy buckthorn (*Rhamnus frangula* L.), has also escaped in temperate North America. It has glossy, shiny leaves that are usually alternate on the twigs. Its flowers have five sepals and five petals. Its fruits are reddish at first, turning dark purple to nearly black as they ripen. The buds are hairy but lack scales. Glossy buckthorn also invades upland forest, but prefers wetter soil than common buckthorn and is very invasive in wet woods and wetlands.

Two buckthorn species are native to the upper Great Lakes region. Alder-leaved buckthorn (*R. alnifolia* L'Her.) is a low, multi-stemmed shrub of floodplains, wetlands, and bogs, from southern Canada south to Tennessee and California. It never gets more than about 4-5 feet tall. It has alternate leaves that are similar to common buckthorn's, but that tend to be somewhat larger and more elongate.

Common buckthorn understory. Common buckthorn retains its green foilage after other trees and shrubs have dropped their leaves. (Photo by MnDNR)



Common buckthorn leaves and fruit. (Photo by Steve Garske)

The flowers have five sepals but lack petals, and the fruits have three seeds each. Alder-leaved buckthorn commonly forms patches several yards across

The second native buckthorn is lance-leaved buckthorn (*R. lanceolata* Pursh). It is a shrub growing up to seven feet tall, with alternate, narrow leaves that taper to a point. It is found in eastern and central North America but is known from the upper Great Lakes states only from southern Wisconsin, where it is rare.

Of all these buckthorn species, only common buckthorn has a short terminal thorn at the tips of some branches.

Reproduction and dispersal

Common buckthorn reproduces almost entirely by seed. The berries of common buckthorn have a bitter taste and are eaten and dispersed mostly by birds. Much of the fruit simply falls to the ground beneath the shrubs, producing a dense layer of seedlings.

Common buckthorn seeds have high viability. Seedling survival is higher on bare soil than on soil with a litter layer and competing plants.

Habitat preference and tolerance

Like many invasive species, common buckthorn has a wide habitat tolerance. It is typically an upland plant, but tolerates a broad range of moisture levels. It is also shade-tolerant (the seedlings are very shade-tolerant) and can invade mature forest. Early leaf-out and late leaf-fall gives common buckthorn an advantage over most native forest shrubs.

Typical habitats colonized by common buckthorn include fields, prairies, riverbanks, and woods. Often plants get started where the seeds are deposited by perching birds and can grow, including fencerows, woodland edges, and under isolated trees. It seems to do best on moist, partly shaded sites.

Ecological impacts

Common buckthorn typically forms dense patches along border edges of woods, moving into the woods after disturbance. Eventually it forms a dense shrub layer, suppressing and driving out native shrubs and tree seedlings.

Like many other introduced plants in North America, common buckthorn leafs out earlier in the spring and holds its leaves longer in the fall than native shrubs do. Because of this early leaf-out, common buckthorn may threaten the eastern deciduous forest's spring ephemeral plants, like Carolina spring beauty and yellow trout lilies, which depend on the abundant early spring sunshine for their survival.

In some areas of the east and midwest, especially near urban areas, buckthorns and other invasive shrubs have taken over the understory of entire woodlots, replacing native shrubs and tree saplings. Eventually, the forest starts to be converted to a shrub "forest" of buckthorn and other introduced plants.

Common buckthorn is also a threat to agriculture, because it is the principle alternate host for two serious introduced agricultural pests: the oat crown rust fungus and the soybean aphid. The fungus causes stem rust, a serious disease of cultivated oats, and requires common buckthorn to complete its life cycle. The soybean aphid is (like the soybean) native to eastern Asia and was first detected in North America in the Midwest in 2000. It has since spread throughout much of the eastern US, including the upper Great Lakes region. This aphid must overwinter on common buckthorn in order to survive the winter.

Management and control

Manual control is usually only practical for small populations or single plants. Removing the largest seed-producing (female) buckthorn plants first will prevent more seeds from being added to the seed bank.

Simply cutting down buckthorn plants will result in vigorous resprouting and regrowth, so cutting is best followed up by immediately painting or spraying herbicide on the cut stump. See "Chemical control" below for more on this technique.

Girdling is widely used on mature buckthorn and will usually kill the plants. Use an axe or a saw to cut two parallel lines around each stem, about 4-5 inches apart. The bark in between these two lines should then be peeled off. Make sure the

(See Stopping the spread, page 20)

Moose: A limited resource in high demand

High mortality in Minnesota moose worries biologists

By Sue Erickson
Staff Writer

Fond du Lac Reservation, Minn.—For whatever the reason, moose—the tall, gangly, giants of the north—have long held a special appeal to people. Perhaps it's the animal's size alone or an association with its remote, northern wilderness habitat that evokes that fascination, or it could be the broad, massive antlers that adorn the stately heads of mature bulls.

While neither an endangered or threatened species, wildlife managers are concerned about moose because they are in popular demand, be it for consumptive or aesthetic purposes.

"Of all the treaty resources in the 1854 Treaty ceded territory, moose currently are the most limited, and the demand is higher than the supply for both Indian and non-Indian alike," says Fond du Lac Wildlife Biologist Mike Schrage.

Both the state of Minnesota and three Ojibwe bands – Fond du Lac, Bois Forte and Grand Portage—allow a limited moose hunt each fall. The state has held a season since 1971; the Fond du Lac band has held a treaty season since 1989. Both the tribes and the state have limited permits that are dispersed in a lottery-like system. For the state hunters, obtaining one of the approximately two hundred permits available annually is a once-in-a-lifetime opportunity; whereas tribal members are more likely to have annual or semi-annual opportunity.

The high interest in moose spurred the need for a cooperative research project designed to learn more about the moose herd, it's patterns and it's problems. After several years of planning among cooperators, the first moose was radio-collared in February 2001.

Now in the third year of the project, staff from the Fond du Lac band and the 1854 Authority, representing the Bois Forte and Grand Portage bands, along with the Minnesota Department of Natural Resources (MDNR) and the U.S. Geological Survey (USGS) staff now have radio-collared 83 moose and have begun compiling biological data taken from the captured moose over the past several years.

The radio-collars carry transmitters, so that researchers can track the movement of the animal through telemetry. The collared animals are tracked on a weekly basis. Two-thirds of the collared animals are cows. Primary interest is taken in the cows because they are key to the species' reproductive success.

The collected data should help wildlife managers better understand the complexities of the moose population. "Previous to the study, we didn't have a good idea how the population worked. We needed information on adult survival rates, calf production and causes of mortality," Schrage says.

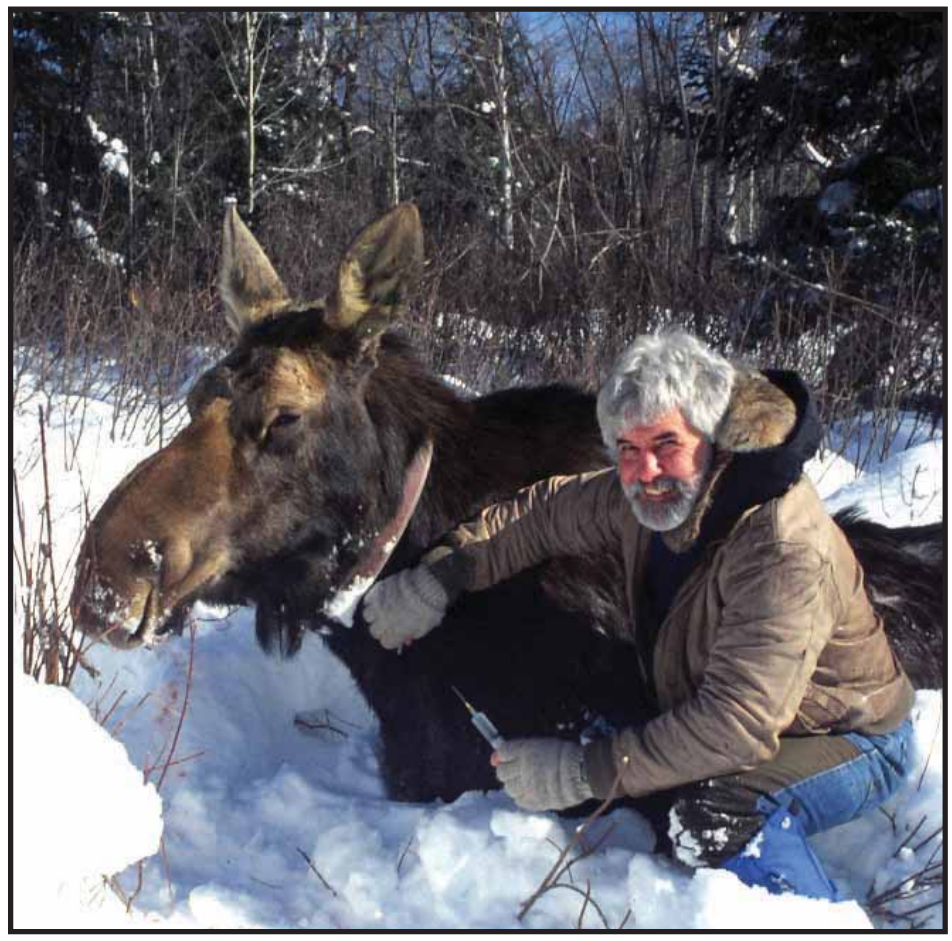
The 2003 population estimate for moose in northeastern Minnesota was 4,200, but Schrage believes the number will rise this year because researchers switched from a fixed-wing aircraft to using a helicopter. The helicopter was able to fly lower and slower than the airplane, and the noise of the rotors often flushed moose out of heavy cover. Many moose were seen that otherwise might have been missed by the airplane.

Even though the population of moose may be higher than previously believed, Schrage and his colleagues are concerned about the rate of adult moose mortality. The study's two-year figure indicates a 25-30% mortality rate, which is high and, if it continues, is a real cause for concern. "This is worrisome if it continues at this rate throughout the length of the study," he says, "and needs good calf production to keep the population stable or growing."

Causes of mortality include hunters, trains, cars, wolves, diseases, and parasites. The later two make up a significant percentage, Schrage says. Researchers take samples from dead moose when they are captured for radio-collaring and again later on if they die. They test for CWD, West Nile Virus, Lyme disease and brainworm. So far, no tests have revealed signs of CWD or West Nile virus.

Blood tests on collared moose have shown that some have been exposed to Lyme and brainworm; however, many of these animals are still alive and healthy. No collared animals are known to have died from these diseases, although some moose without collars have been reported by the public that were discovered to have died from brainworm.

The winter tick presents a serious problem for moose that become heavily infected. The moose usually pick up the ticks in the fall. A serious infestation will cause the moose to rub against trees, enough to leave them hairless in large patches. Without their protective winter coat, they can succumb to hypothermia. Schrage says up to 50,000 ticks have been recorded on one moose, so the infestations can be very severe. This winter the crew radio-collared 18 moose; all had ticks, some more than others, Schrage says. Warm, dry fall and spring weather are more conducive to heavy tick populations.



Glenn DelGiudice, biologist with the MDNR, gives a reversal drug to a cow moose. (Photo submitted by Fond du Lac Natural Resources)

Radio-collaring moose is a tricky and expensive business. The project hired a two-man crew (a pilot and a shooter) from Alaska with a small, highly maneuverable helicopter to tranquilize the moose for collaring. Staff in a fixed-wing Cessna 185 locates the moose and provides the vectors to the helicopter crew. The copter flushes the moose into an open area, and the shooter fires a tranquilizer dart into the animal's hindquarters.

Once down, the shooter starts with applying the ear tags and collar, while the copter picks up other crew, who proceed with various monitoring activities. A tooth is pulled for aging; blood samples are taken; hair samples taken for heavy metal testing and fecal samples for pregnancy testing. Moose are checked for external parasites like winter ticks, and an ultrasound is used to measure fat. Body temperature is also recorded. Finally, a reversal shot is given, and the moose wakes up in about three minutes. The whole procedure takes about one-half hour.

Unlike the previous two seasons, this year researchers had to contend with waist-high snow to reach the tranquilized animal, making a difficult job even more challenging.

If a dead moose is reported, it is also imperative to get to the carcass quickly in order to collect the samples needed for testing. Predators, scavengers and hot weather can quickly dispose of a carcass, destroying the opportunity to learn why it died.

An average life span for a moose is between eight and twelve years. However, researchers estimate one radio-collared cow to be about eighteen years old and one bull to be about sixteen.

On rare occasions twelve to fourteen moose may be observed together, Schrage says, but they tend to be more solitary than herd-oriented. Typically, two or three may be together. They also tend to stay in the same location, although one collared bull has traveled fifty miles north to Ontario and seems to like it there. Another bull routinely migrated each fall from Isabella, Minnesota, across twenty miles of blowdown, to the Boundary Waters and returned in the spring.

The current three-year study was funded in the large part by the MDNR, with the three cooperating tribes contributing funds and staff time; the USGS contributed staff time. Fond du Lac was awarded a Tribal Wildlife Grant, which will help fund much of the research for the next four years. This will include another round of radio-collaring and some extra fly time to investigate calf production. In the spring they will be checking for calf survival numbers and later try to get a count on how many calves "hit the ground." Calving season usually occurs in late May. This will give researchers a better idea on the survival rate for moose calves and the chances for a growing moose population.

Together, the tribes and agencies have successfully gathered needed data for a project that was too complex and expensive for any one of the entities to accomplish alone, Schrage says. He looks forward to continuing, cooperative research that will contribute to the health and well-being of those magnificent beasts—the Minnesota moose.

A cow moose recovers from a tranquilizing drug wearing eartags and a radio-collar. (Photo submitted by Fond du Lac Natural Resources)

Ceded territory news briefs

Native son heads to D.C.

Famous Dave confirmed as Assistant Secretary-Indian Affairs

Washington, D.C.—David Anderson, a Lac Courte Oreilles tribal member, was sworn into office as Assistant Secretary–Indian Affairs under the Department of the Interior (DOI) by Secretary Gale Norton during a ceremony on February 23.

Anderson, well known for his Famous Dave's chain of restaurants featuring barbequed ribs, brings his entrepreneurial experience, enthusiasm and concern for Indian issues to the position. Anderson is responsible for fulfilling the DOI's trust responsibilities and promoting self-determination on behalf of the 562 federally recognized American Indian and Alaska Native tribal governments.

"There are many opportunities and challenges ahead, and my first order of business is to continue to immerse myself in the issues at hand and to work hand-in-hand with the American Indian and Alaska Native tribal governments, as well as the Bureau of Indian Affairs to determine the immediate goals and priorities of these organizations," Anderson says.

Anderson has served on numerous national and state commissions, including the American Indian Education Foundation (2003); presidential Advisory Council for tribal Colleges and Universities (2001); National Task Force on Reservation Gambling (1983); Council on Minority Business Development for the State of Wisconsin (1983); Wisconsin Council on Tourism (1983), and Harvard University's Native American Program.

Harvard grants high honors, $10,000 to LCO for Flowage Plan

Lac Courte Oreilles, Wis.—The Lac Courte Oreilles (LCO) band was among eight tribal governments to receive a coveted $10,000 award for outstanding achievement from Harvard's Kennedy School of Government at a November 2003 ceremony in Albuquerque, New Mexico.

LCO collected "high honors" for The Chippewa Flowage Joint Agency Management Plan, an agreement forged by tribal representatives, the US Forest Service and the Wisconsin Department of Natural Resources.

Ratified in 2000, the pact outlines environmental management goals for the Flowage, including special protections for sensitive, cultural areas.

The award was given as part of Harvard's Honoring Contributions in the Governance of American Indian Nations, which identifies and celebrates exemplary tribal government programs among the more than 550 Indian nations in the United States.

HONOR hires new regional coordinator

Minneapolis, Minn.—Lifelong Minnesota resident and Mille Lacs Band member, Kim Meyer, assumed the position as HONOR's regional coordinator at HONOR's regional office in Minneapolis. She brings over twelve years of experience as a legislative staff person. More recently she worked for the American Lung Association of Minnesota as the Public Policy and Advocacy Manager. As regional coordinator, Meyer will be involved with advocacy, research, public relations and writing for the HONOR Digest.

Rose Soulier, Red Cliff, remains responsible for the *HONOR Digest* as well as for HONOR's day-to-day fiscal management.

HONOR originally formed in Wisconsin during the 1980's treaty struggles that brought sometimes violent and racist protest to Wisconsin's boat landings each spring. In Minnesota HONOR has responded to anti-Indian organizations, such as PERM and the Mille Lacs Tea Party, which have actively opposed the 1837 Treaty rights. Today, HONOR is a national organization advocating for tribal rights and educating on a broad spectrum of Indian issues.

Meyer can be reached at (612) 827-2766 or e-mail at info@honoradvocacy.org.

Off-reservation winter spearing survey to wrap up in April

Winter spearing harvest surveys on lakes in the Lac du Flambeau area are scheduled to run through April 4. GLIFWC creel clerks began surveying treaty harvest activity on nine off-reservation lakes in Vilas and Oneida Counties in January. Clerks tally a handful of information including numbers of tribal fishermen observed, how much time they spent fishing and species harvested. The data is used to estimate tribal harvest through the ice for fish species like muskie, northern pike and walleye. A similar survey was conducted on off-reservation lakes in the Lac Courte Oreilles region last winter.

Giiwegiizhigookway Martin is a Nimrod

Lac Vieux Desert, Mich.—Giiwegiizhigookway (Betty) Martin is a Nimrod along with a host of other Lac Vieux Desert tribal members who attended Michigan's Watersmeet High School and participated in team sports. "Kids from other schools would call us Numrods," Martin says, "so when I was in school, I wished we had another name."

However, today after national, indeed worldwide, publicity has focused on the Nimrods following an ESPN advertisement during the Super Bowl, Martin wouldn't trade the name. Interviews on the CBS Morning Show and the Jay Leno Show have brought notoriety to the school's team and to the tiny town of Watermeet, Michigan. Several Nimrods who traveled to Hollywood for the Jay Leno Show as members of the boys' basketball team are also LVD tribal members.

Martin says the school has been receiving 300-500 e-mails a day following the publicity, and they can't keep up with sweatshirt sales, which are providing unanticipated revenue to the school. The Nimrods were selected by ESPN for the most unusual team name. Nimrod is a Biblical character, and the word means to be a great hunter or sportsman.

Go Nimrods!!!

Fond du Lac Band granted Clean Air Act authority

Chicago, Ill.—The U.S. Environmental Protection Agency (EPA) Region 5 recently granted the Fond du Lac (FdL) band authority to administer parts of the Clean Air Act. FdL is the first tribe in Region 5 to be granted this authority.

Under this authority, the Minnesota Pollution Control Agency (MPCA) and the Wisconsin Department of Natural Resources must notify FdL in advance of any Clean Air Act Title 5 operating permit applications it receives for sources within a five-mile radius of reservation boundaries. FdL would then review applications and provide comments that the states may take into consideration before issuing permits.

Also the band's 40 percent match for its outdoor air-quality monitoring program grants will be cut to 5 percent. FdL collaborates on various air monitoring projects with the MPCA and the University of Minnesota, Duluth.

FdL first submitted a proposal to the EPA in the summer of 1999, and submitted a final application for this authority to the regional administrator in 2002.

State spearers break records on Lake Winnebago

Exceed quota of female sturgeon

Oshkosh, Wis.—Spearers registered 1,303 sturgeon on February 14, opening day of the Lake Winnebago sturgeon season, according to the Wisconsin Department of Natural Resources' (WDNR) *News and Outdoor Report*.

By the time the season closed on February 15, 1,847 sturgeon were harvested. A total of 689 adult females were taken, putting the harvest 264 fish over the cap.

Besides setting the highest one-day harvest record and being the shortest season ever, the largest sturgeon (188 pounds and 79.5 inches long) was harvested, breaking the previous 51-year old record of 180 pounds.

State fishery managers expressed concern over the overharvest. "Spearers were happy with the conditions and their success, but the harvest cap for adult females was exceeded by 62 percent and that concerns us," said Ron Bruch, WDNR fisheries supervisor in Oshkosh. "The overharvest this year indicates that our system to control the sturgeon take, while close, falls a little short in safeguarding the population and the tradition of spearing for the long haul."

Tribe favored in Mille Lacs Band boundary lawsuit

Onamia, Minn.—A March 9 ruling of the Eighth District U.S. Court of Appeals affirmed the earlier dismissal of a Mille Lacs County's lawsuit, which sought to disprove the continued existence of the original 61,000-acre Mille Lacs Indian Reservation.

The appellate court upheld the May 2003 opinion of U.S. Judge James Rosenbaum who dismissed the case because the county did not have legal standing to question the status of the reservation boundaries.

In a seven-page decision, the appellate court said Rosenbaum was correct to dismiss the case because neither the county nor the First National Bank of Milaca, which joined the county as a co-plaintiff, could establish they had been injured or threatened by the possible existence of the old reservation boundaries. Any harms were, at this point, speculative rather than real.

The Mille Lacs Band of Ojibwe welcomed the decision, noting that the two-year litigation had been costly to the county and tribe alike and that future cooperation and respect between the county and tribe would provide improved services to all county and tribal citizens.

Senate Committee on Indian Affairs to lose leaders

Washington, D.C.—Leadership in the Senate Committee on Indian Affairs is headed for a change, according to the March issue of *Native American Report*. According to the report Committee Chairman Senator Ben Nighthorse Campbell (R-Colo.) will not seek reelection this year.

In addition, Senator Daniel Inouye (D-Hawaii) will step down from his position as vice-chairman of the committee to become ranking member in the Commerce Committee when the 109th Congressional session begins in January 2005. He will, however, remain a committee member.

Inouye spearheaded the joint fishery assessment in Wisconsin which produced the *Casting Light Upon the Waters Report* in 1991 in order to address the walleye fishery issues that were causing violent controversy in Wisconsin. Those joint assessments have continued in Wisconsin ceded territory lakes and periodic updates, entitled *Fishery Status Updates*, are published every several years.

When Inouye first took leadership in the committee in 1987 it was a "select" committee, meaning only a temporary committee. It is now a permanent committee of the Senate. During his tenure with the committee, Inouye says he has visited about one-third of the tribes, more than any other congressman in U.S. history.

Gov. Doyle affirms government-to-government relationship with tribes

Madison, Wis.—Wisconsin's Governor Jim Doyle recently issued Executive Order #39, affirming the government-to-government relationship between the state and the state's eleven tribal governments. The order directs cabinet agencies to recognize the "unique legal relationship between the State of Wisconsin and Indian Tribes, respect fundamental principles that establish and maintain this relationship and accord Tribal governments the same respect accorded other governments." It also directs cabinet agencies to recognize the government-to-government relationship when making and implementing polices and programs that impact the tribes.

Authorities discuss law enforcement in ceded territory

Odanah, Wis.—Law enforcement officers and judicial representatives from around the region met on February 25 to review stop, search and seizure protocols in the ceded territory. Sponsored by the Great Lakes Indian Fish & Wildlife Commission (GLIFWC), the daylong event entitled "Ceded Territory Interjurisdictional Law Enforcement Training," brought together 70 officials from individual tribes, federal agencies, states, and counties.

Presenter and GLIFWC Policy Analyst James Zorn said the meeting provided a valuable forum for enforcement professionals to ask questions and clarify how, for example, GLIFWC officers should handle non-tribal violations without jeopardizing either the other jurisdiction's criminal prosecution or a person's civil and constitutional rights. While their primary job is to enforce tribal off-reservation conservation codes, GLIFWC wardens often encounter situations that have no set of procedural rules.

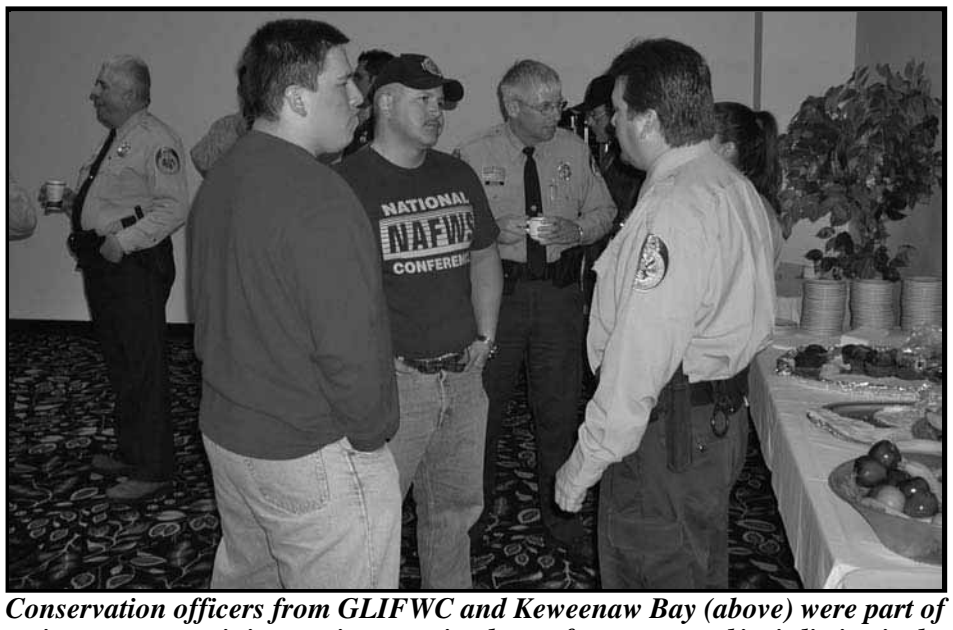
"Our wardens are frequently called upon to assist other officers," Zorn said. "Questions have subsequently arisen over GLIFWC's jurisdiction and authority to help enforce laws in the ceded territory,"

In many regions, GLIFWC officers have developed strong working relationships with local authorities. Over the years GLIFWC wardens have responded to "officer down" and weapons incidents when officers from other agencies have been shot and where there have been weapons threats. In addition, GLIFWC officers have assisted local law enforcement agencies in locating or apprehending fleeing suspects.

A number of GLIFWC officers are cross-deputized by the Wisconsin Department of Natural Resources (WDNR) and receive police powers granted by counties. In some regions of the ceded territory, however, area authorities have little understanding of GLIFWC and its responsibilities.

"This training session has been a good introduction for some jurisdictions where GLIFWC is not well known," said Vern Stone, GLIFWC Central District Supervisor. "It's been a lesson in sovereignty and tribal enforcement laws."

Mike Bartz, WDNR Northern Regional Warden, led an afternoon discussion about the expanded powers that some conservation officers have in the state. Bartz explained that expanded, or police authority, is granted by county sheriff's departments on an on-call basis. A number of counties routinely issue police powers to tribal police, WDNR and GLIFWC wardens in the ceded territory.



Conservation officers from GLIFWC and Keweenaw Bay (above) were part of an interagency training session to review law enforcement and jurisdiction in the ceded territory.

GLIFWC wardens incorporated ice rescue sleds into their annnual cold water training on Chequamegon Bay in Ashland, Wisconsin.

Articles & photos by Charlie Otto Rasmussen, Staff Writer

GLIFWC's enforcement division gets a new chief

Odanah, Wis.—Former Lac du Flambeau tribal conservation officer Fred Maulson assumed leadership of GLIFWC's Enforcement Division on March 1. As head of GLIFWC's 14-member warden force, Maulson said he plans on further developing the role of Commission officers, including expansion of public safety education programs. GLIFWC wardens routinely conduct ATV, snowmobile, boating and hunter safety education classes on or near many reservation communities, and Maulson hopes to step up safety programs in underserved areas. Another priority for Maulson is to continue developing cooperative relations with state and federal resource enforcement officers.

Fred Maulson

Maulson grew up hunting and fishing in the Lac du Flambeau area and ran traplines in the fall to earn spending money. A one-time St. Louis, Missouri resident, Maulson said he wanted his three children to have the same outdoor opportunities he did, prompting he and his wife to move the family to Lac du Flambeau around six years ago.

He earned an Associate Degree at Vermillion College in Ely, Minnesota, followed by a Bachelor Degree in Sports Management at Lindenwood University in St. Louis. His Basic Law Enforcement credentials were acquired through a training program at Chippewa Valley Technical College in Eau Claire, Wisconsin.

Conservation enforcement additions in Upper Michigan

L'Anse, Mich.—Two Upper Michigan natives joined GLIFWC's Conservation Enforcement Division in February as Keweenaw Bay area wardens. Regional Supervisor Tim Tilson said the additions provide more effective coverage of off-reservation hunting and fishing in the Michigan treaty area. A total of five GLIFWC wardens are stationed at satellite offices in Keweenaw Bay, Lac Vieux Desert and Bay Mills.

GLIFWC's new Keweenaw Bay area wardens are Jim LaPointe and Summer Cohen.

New recruits Jim LaPointe and Summer Cohen join Tilson in patrolling Keweenaw-area forests, rivers and lakes in addition to 1842 Lake Superior waters. With at least two wardens available to jointly patrol Lake Superior, operations aboard GLIFWC's 25-foot Boston Whaler, *Ojibwa Lady*, can be conducted more safely, Tilson said. From search-and-rescue operations to locating lost commercial fishing nets, Tilson said that it can be a tough and dangerous job for only one warden.

Finding the pace of retired life a little too slow, enrolled Keweenaw Bay member Jim LaPointe returns to the field of law enforcement—this time around in a GLIFWC uniform. As former Michigan Department of Natural Resources warden supervisor for the western Upper Peninsula, LaPointe brings considerable experience in tracking hunting and fishing activity in the region. LaPointe's 25-year enforcement career includes experience as a Michigan State Trooper, a DNR field warden in both downstate and Upper Michigan, and ultimately promotion to DNR Supervising Sergeant.

The opportunity to work on Lake Superior was a major incentive to leaving retirement, he said, adding that his most enjoyable years as a state warden occurred prior to his promotions when he spent most of his time in the field. LaPointe grew up in L'Anse and earned a B.S. in Police Administration from Ferris State University in Big Rapids, Mich. He is married and has three children.

A lifelong Marquette-area resident and enrolled Lac du Flambeau member, Summer Cohen joins GLIFWC less than a year after graduating from Northern Michigan University's Prelaw program. Cohen weighed several diverse career options before joining GLIFWC: going onto law school, developing contemporary Indian clothing, or returning to a familiar environment of woods and water of her youth. Raised in a primitive cabin on forty forested acres south of Marquette, Cohen said she was ultimately drawn to work that required a lot of time outdoors.

An avid pow wow dancer, Cohen said she'll continue to design dance regalia and other fashions in her free time. She has a nine-year-old daughter and recently completed the move from Marquette to L'Anse. This autumn Cohen is scheduled to complete a 520-hour basic recruit training course at Chippewa Valley Technical College in Eau Claire, Wisconsin.

Emerald ash borer invades Michigan

Introduced insect has killed or damaged millions of ash trees

The emerald ash borer, *Agrilus planipennis* Fairmaire, an insect native to Asia, has recently been introduced to North America, probably in the wood of Asian ash species used for stabilizing cargo in ships or for crating heavy consumer products. Scientists first detected this insect in May 2002 in southeastern Michigan, and by July 2002, they detected it across the St. Clair River in Windsor, Ontario in Canada.

Its rate of spread has been alarmingly quick. It has already killed or damaged millions of ash trees. It apparently infests all species of ash. In an effort to control its spread, government authorities in the United States and Canada have issued a quarantine on all ash trees and products, including firewood, in the affected areas.

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 overwinter 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.

The adult borer measures approximately 1/2 inch long. Its iridescent, metallic green backside compliments its bright, emerald green bottom side. The larva, at maturity, has a wormlike body measuring approximately one inch long and is divided into triangular-shaped segments.

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.

Anishinaabe uses of ash

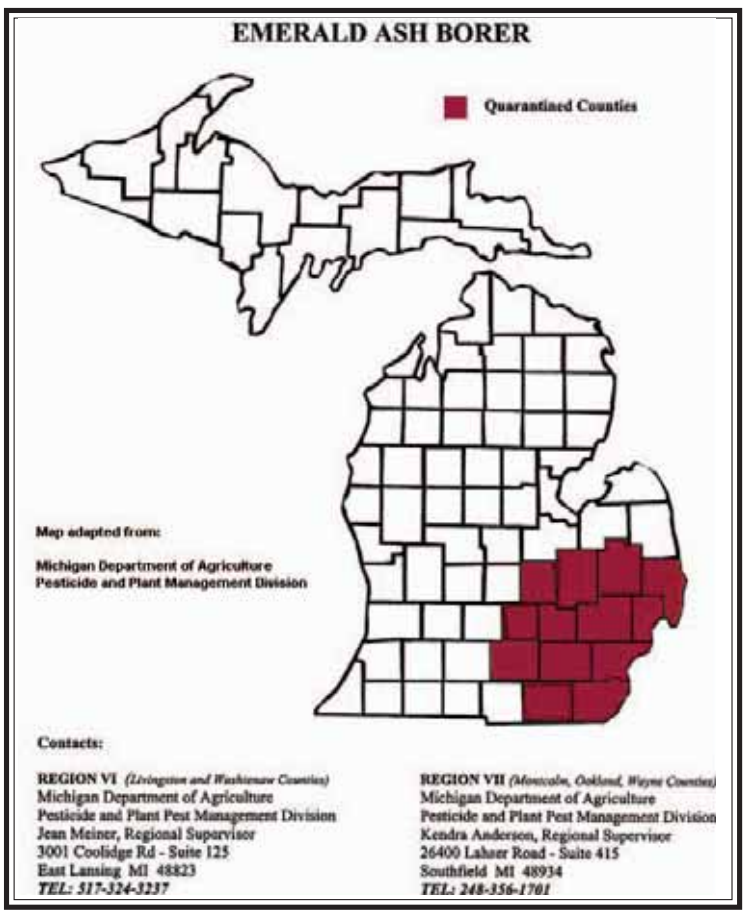
Species of ash growing in the Northwoods include aagimaak (black ash, *Fraxinus nigra* Marshall), baapaagimaak (white ash, *Fraxinus americana* Linnaeus), and green ash (*Fraxinus pennsylvanica* Marshall). All three species have medicinal uses for the Anishinaabe. The wood of aagimaak and baapaagimaak is also widely used for constructing baskets, snowshoes, sleds, and other utility items.

Note: American mountain ash (Sorbus americana Marshall) is not a true ash and does not appear to be susceptible to the emerald ash borer.

Trees rarely survive an infestation. Healthy trees with low levels of infestation may potentially be saved using insecticides. But even then, the effectiveness of insecticides has not yet been conclusively determined.

The potential for the emerald ash borer to decimate ash tree species in North America has experts gravely worried. Hence, a program has been initiated to educate the public on the need to abide by the established quarantine areas and to report suspected infestations. Furthermore, the public has been instructed to dispose of infested ash trees by either burning or taking them to designated disposal sites.

For further information, call the Emerald Ash Borer Hotline toll-free at 1-866-325-0023 or log onto the following websites: www.ncrs.fs.fed.us/4501/eab, www.na.fs.fed.us./spfo/eab/index.html or www.emeraldashborer.info.



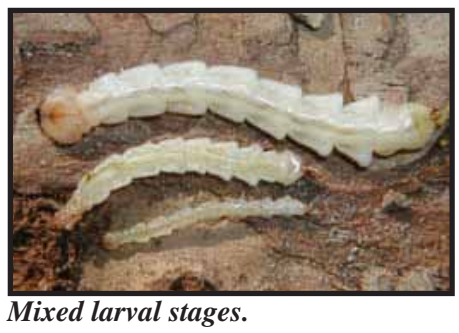
Emerald Ash Borer Identification

Adult Beetle:
- 1/2 inch long
- backside—iridescent, metallic green
- bottom side—bright, emerald green


Newly emerged adult beetle.

Larva:
- at maturity, one inch long
- worm-like body, divided into triangular segments

Symptoms of Infested Trees:
- branch dieback
- thinning of the canopy
- abundant shoot growth along the trunk
- D-shaped holes, 1/8 inch across, on the trunk caused by adult beetle emergence
- zig-zag tunneling on the inner bark caused by larvae feeding
- increase in woodpecker activity, likely utilizing the larvae as a food resource


Mixed larval stages.

These symptoms may be indicative of other diseases or insect outbreaks, including canker diseases, root rots, and native borer infestations. If an infestation of emerald ash borer is suspected, notify your regional department of natural resources forest health specialist for verification. ***(Photos by David Cappaert, Michigan State University)***

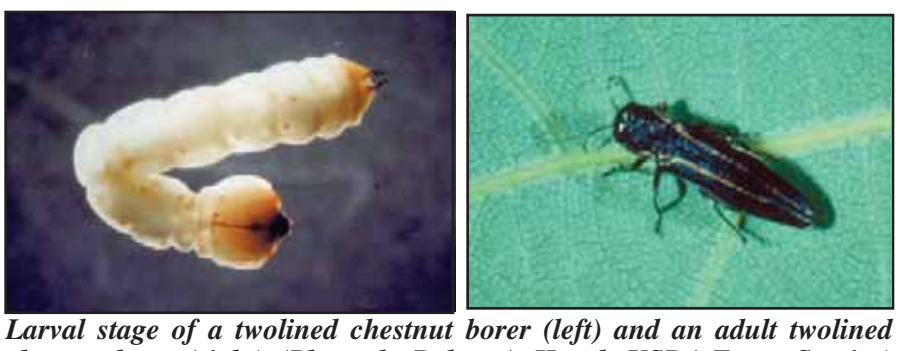
Twolined chestnut borer outbreak

Native insect not a threat to healthy trees

The twolined chestnut borer, *Agrilus bilineatus* Weber, infests weakened oaks, *Quercus* spp. An insect native to our forests, its primary host used to be the American chestnut, *Castanea dentata* (Marshall) Borkhausen. Around 1900, many American chestnut trees died due to the accidental introduction of an Asian fungus known as chestnut blight, *Cryphonectria parasitica* (Murrill) Barr. With fewer chestnut trees, oaks became the primary host for the chestnut borer.

Unlike the emerald ash borer (see above), the chestnut borer does not kill healthy trees. Essentially, a healthy oak has a functioning "immune system" to repel the chestnut borer. Thus, chestnut borers typically infests oaks that have already been significantly damaged by various environmental factors. For example, recent drought conditions and the outbreak of the forest tent caterpillar, *Malacosoma disstria*, have weakened many of our forest's oaks, making them susceptible to this insect. National forest and state forest personnel have noted a significant increase in oak mortality.

Ironically, oaks may benefit from outbreaks of the chestnut borer. Dr. Timothy Schowalter, a professor of entomology at Oregon State University, has been studying the role of native insects in maintaining forest health in the Pacific Northwest. Native insects may be one of the important factors in preventing an overcrowding of trees. By attacking weakened trees, native insects create conditions more favorable for healthy trees—keeping healthy trees healthy.


Larval stage of a twolined chestnut borer (left) and an adult twolined chestnut borer (right). (Photos by Robert A. Haack, USDA Forest Service)

Only recently have entomologists begun changing their view of native insects from vectors of destruction to devices of healthy forest management. Similar to the changing views on the role of fire in forest management, the benefits of native insects may become more acceptable as researchers uncover more examples of this positive relationship.

On the contrary, insects introduced from other areas, such as the emerald ash borer, have not developed a long term relationship with our forests. Trees, healthy or not, often have no "immunity" to these introduced insects. Consequently, introduced insects often spread rapidly, independent of and not limited by, environmental factors that weaken trees.

An adult twolined chestnut borer measures approximately 1/2 inch long. Two, faint, golden lines decorate its black back. The larva measures approximately

(See Twolined chestnut borer, page 22)

Articles by Karen Danielsen
GLIFWC Forest Ecologist

Tribal resource management in the Great Lakes Fishery

CORA assists tribes in 1836 ceded territory

By Charlie Otto Rasmussen
Staff Writer

Sault Ste. Marie, Mich.—As federal courts consistently uphold the reserved rights of Ojibwe people in the upper Great Lakes, tribal natural resource organizations are increasingly vital co-managers of fish, wildlife and the environment. While individual tribes maintain departments to oversee on-reservation resources, the remainder of the treaty-ceded territories in Michigan is administered by two intertribal agencies: Great Lakes Indian Fish & Wildlife Commission (GLIFWC) and Chippewa Ottawa Resource Authority (CORA).

With five member tribes from the upper and lower peninsulas of Michigan, the Sault Ste. Marie-based CORA regulates treaty harvests in the 1836 ceded territory. Like GLIFWC's role in the 1842 ceded territory, CORA works to conserve fish stocks and other natural resources for future generations.

"The 1836 Treaty fishery is probably one of the most regulated fisheries in the world," said Jennifer Dale, CORA public information officer. "We are subject to regulations of each tribe, CORA, as well as federal maritime and seafood safety regulations. Tribal fishers also attend HACCP training." HACCP, or Hazard Analysis Critical Control Point System, is a systematic approach to food safety designed to avoid food borne illnesses.

Originally organized as COTFMA, or Chippewa Ottawa Treaty Fishery Management Authority, CORA formed in association with the 2000 Consent Decree and added two more treaty tribes. Crafted by tribal, state and federal officials, the Consent Decree allocates harvest limits for commercial and sport-fishers and five Michigan tribes: Bay Mills Indian Community, Grand Traverse Band, Little River Band, Little Traverse Bay Band and Sault Ste. Marie Tribe.

"The 2000 Consent Decree requires an incredible amount of ongoing work to determine annual harvest levels based on biomathematical models. The models are formulated using both tribal and state figures, such as data from catch reports and assessments," Dale explained.

Federal and state biologists join fisheries experts from the five tribes to form the 1836 Technical Fishery Committee, which calculates safe harvest levels for each species. The group meets around six times a year to share information and discuss management options.

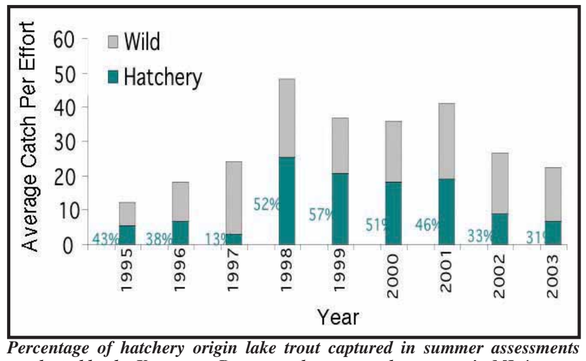
"The current agreement differs from its predecessor, the 1985 Consent Order, by using biology—managing by species—rather than a geographic, or zonal approach to determine what's best for the conservation of the fishery, now and in the future," Dale said. "The lakes are still on a grid system, but management will be accomplished by fish species."

While lake whitefish is the most important commercial species to tribal fishermen, Dale said the heart of the 20-year Consent Decree lies in lake trout recovery, especially in Lakes Huron and Michigan. Primary rehabilitation zones established through the Decree protect historic spawning sites and control commercial and angler harvest.

Treaty fishing areas are patrolled by conservation officers from the five CORA members to enforce tribal codes, U.S. Coast Guard vessel safety regulations and HACCP guidelines. Tribal wardens work cooperatively with Michigan Department of Natural Resources officers who share authority to cite tribal recreational, commercial and subsistence fishers for civil and criminal infractions. Each CORA tribe has an established judicial system, and treaty fishermen cited for a violation under the Consent Decree are ordered into tribal court for judgment.

Fisheries staff harvest lake trout eggs for the Keweenaw Bay Tribal Hatchery. (Photo by Gene Mensch)

Bay Mills biologists set up a catch report for tribal fishermen returning to a boat landing. (Photo by Jennifer Dale)



Percentage of hatchery origin lake trout captured in summer assessments conducted by the Keweenaw Bay natural resources department in MI-4 waters of Lake Superior, 1995-2003. Catch per effort standardized to lake trout/2250 ft of net set.

Stocking Strategy

Focus on/near KBIC Reservation

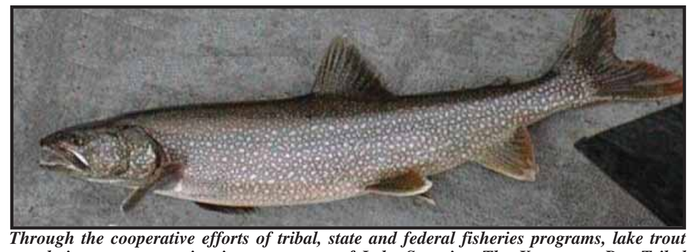
Stock at multiple sites

Stock yearling (or older) lake trout

Stock at night

Stock healthy fish

Unique fin clip, CWT insertions



Through the cooperative efforts of tribal, state and federal fisheries programs, lake trout populations are recovering in many areas of Lake Superior. The Keweenaw Bay Tribal hatchery serves as an isolation facility, providing disease-free lake trout brood stock for rehabilitation programs in the Great Lakes. (Illustrations by Gene Mensch)

Keweenaw Bay hatchery, interagency partnerships enhance Michigan fishery

By Charlie Otto Rasmussen, Staff Writer

L'Anse, Mich.—Over the past fifteen years, the Keweenaw Bay (KB) Tribal Fish Hatchery in Pequaming, Michigan has played a leading role in restoring native fish populations to Lake Superior. Through tribal programs and partnerships with the U.S. Fish & Wildlife Service (USFWS) and Michigan Department of Natural Resources (DNR), hatchery staff have turned out nearly two million lake trout, brook trout, walleye, largemouth bass, and whitefish ranging in size from 1.5 to 14 inches long.

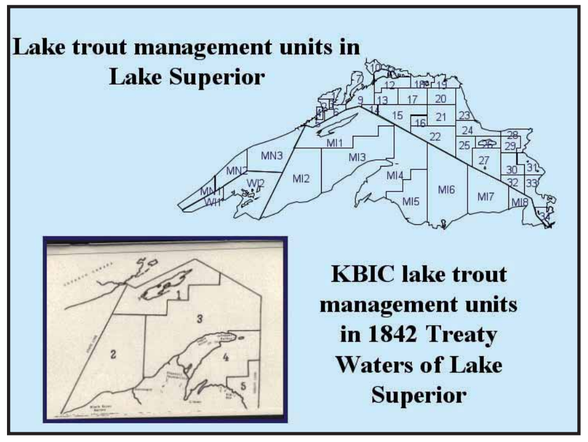
"Our focus is to manage and enhance native fish species in our area," said Mike Donofrio, Natural Resources Director for the upper peninsula tribe. "There is some public interest in seeing rainbow trout and salmon stocking, but those species don't fit with our approach to ecosystem management."

Tribal resource officials concentrate stocking efforts in the waters around the Keweenaw Bay, Huron Bay, several inland lakes, and Baraga County streams.

Through a series of five pacts with the USFWS, the KB Hatchery has served as an isolation facility for trout brood stock since 1995. Fisheries biologists gathered lake trout eggs from several locations for propagation and isolation at the Pequaming hatchery including: Klondike reef north of Grand Marais, Michigan; Traverse Island reef in Keweenaw Bay, Gull Island shoal in Wisconsin's Apostle Islands, the Siskiwit River at Isle Royal National Park and Marquette Harbor.

While the hatchery raised and monitored brook trout under the initial agreement, the inter-agency covenants have focused on the development of healthy lake trout over the past seven years. With notable success, the hatchery has consistently yielded disease-free trout from wild, fertilized eggs provided by federal and state fisheries biologists.

"Any time you bring wild eggs into a hatchery, there is a risk of bringing in diseases as well," Donofrio explained. "Trout reared at our isolation facility are routinely inspected over two years, and those showing signs of disease are removed."



From eggs to healthy yearlings, the trout leave the tribal hatchery approximately 10-inches long and are transported to Wisconsin-based federal hatcheries in Iron River and Genoa. Once the fish reach sexual maturity, biologists use the disease-free trout for propagation and restoration programs in Lake Superior.

"The offspring from the brood stock are stocked back into areas of Lake Superior without natural reproduction or areas producing a short supply of fish," Donofrio said. "This cooperative effort is designed to benefit everyone who values the resource."

Following the early successes of the tribal-federal partnership, the state DNR has signed on to more recent agreements, providing additional money and expertise to enhance and monitor the fish populations.

"We've had a good working relationship with the tribe," said George Madison, DNR fisheries biologist. "These cooperative efforts are effective ways to improve the fishery, and we look forward to pooling our resources on future projects." In addition to the ongoing trout brood stock development, the three agencies are working to create a family-oriented largemouth bass fishery at Lighthouse Pond near Baraga. The site is a popular recreation area used for picknicking and is home to an annual pow wow.

First hand drum competition at LCO gets great reviews

Bad River singers win big

By Sue Erickson
Staff Writer

Lac Courte Oreilles, Wis. —Extra seats had to be brought in to accommodate the crowd attending the first-ever, WOJB Radio-sponsored hand drum competition February 14 at the Lac Courte Oreilles (LCO) Casino Lodge and Convention Center. The event contributed to a Valentine's Day full of powerful drumming, singing and dancing that extended from noon to 10:30 in the evening.

Camille Lapaca, WOJB Radio manager, was pleasantly surprised by the turn-out and the positive comments about the event, which make her hopeful the competition will grow in coming years.

The rules required a three-man hand drum team with no more than three women back-up singers. A panel of judges considered attire and showmanship, drumming and singing styles, originality, use of the Ojibwe language, and audience participation to determine the winners.

And for the winners—first place went to a drum group from the Bad River reservation, Powless Incorporate. The singers included Wendell, Jerome and Martin Powless. One of their songs was sung entirely in the Ojibwe language, which Lacapa thinks may have been a deciding factor. The group also returned $100 of their $1,000 prize money to WOJB to use for the next hand drum competition, obviously hopeful that this competition will grow into an annual tradition.

Second place went to Midnight Express, featuring Crow Belkourt, John Morrow and Opie Day Bedau, and the third place win went to the Mille Lacs Band Singers, comprised of Eric, Less and Gabe Gahbow.

Between performances, an opportunity was taken to honor LCO elder Sarah (Cookie) Morrow with an honor song and dance. She was present to hear several of her grandsons, George and John, perform during the competition.

Emceed by Larry "Amik" Smallwood, Mille Lacs, and Eddie Benton-Banai, LCO, the event continued after the competition to include a dance to honor the judges and a huge round dance that packed the auditorium's floor as everyone joined in the dance.

Among the competitors at the hand drum contest were Menominee's Smokey Town Singers. The powerful beat and voices of the singers filled the auditorium. Each drum group was judged on a series of three songs. The winning group, Powless Incorporated, sang one song entirely in the Ojibwe language. (Photo by Sue Erickson)

Participants also enjoyed the music of Randy Wood, Northern Cree Singers, who performed songs from his latest release, "Round Dance Blues."

Native pride

By Sam Maday, Bad River tribal member
& Ashland High School student

I walk into the classroom and sit down. Something catches my eye. I look up at a bunch of words on the wall. It was obviously vandalism. Shame fills inside me and turns to anger as I read what is written: "Native Pride."

In my four years here at Ashland, I have seen a problem grow concerning ethnicity. It has been here a long time. Ethnicity is not only used as an excuse in this school; it is used as a weapon. It is used to get away with things, to get out of being in trouble, and to threaten the staff. People don't admire this kind of behavior. They see it as us just trying to get attention. It is as if we are trying to demand respect from people. In the end, we are not respected because of this behavior. The ethnic excuse and the conflicts it causes are getting worse. There is a snowball effect going on, and it needs to be stopped before there is violence.

Native Pride is not about how loud and obnoxious we are in the hallways or in study hall. People are just trying to get through school. They don't care about what's going on in our lives, and when we behave this way, we are dragging them into our business.

Native Pride is not about what we can get away with in school. We deliberately disobey the rules everyone else must follow and get mad when we get caught. We shouldn't try to get out of it or blame someone else or accuse anyone of racism. We should take responsibility and face the consequences of our actions—or even better—we could avoid doing it in the first place.

Native Pride is not about rebellion. Doing things that are against the rules does not make us cool. If we think it is cool to stand in the middle of the hallway and make it difficult for others to get to class—we're not cool—we're just standing in the hall.

Seven Gifts	
zaag'iwewin	love/caring
debemowin	honesty/truth
dabasenimowin	humility/modesty
zoongenimowin	courage/bravery
ganaadenimowin	respect/honor
bagidinidizowin	trust/loyalty
gikendamaawin	wisdom/knowledge

Native Pride is not about how we look. It is healthy to stick together and be in a group, but not to the extent of vandalism and disrespectfulness. There are no gangs in Bad River, so we should all stop pretending to be in one.

Native Pride is not about disrespect. Some Native students may think that they need to be shown respect before they can give it and use this as an excuse to misbehave in class. However, even in the Ojibwe language class, where the teacher is a Native and treats every student with the greatest respect, some students are still disrespectful and misbehave repeatedly.

There is another answer: True Native Pride. It will give us greater respect from everyone. It starts with ourselves.

Dr. Martin Luther King Jr. said that "a firm self-esteem is the most powerful weapon." I think we need to stop caring about what our friends think and start looking at ourselves. Replace the word "Negro" with Native in what he says in this next quote.

"The Negro will only be free when he reaches down to the inner depths of his own being and signs with the pen and ink of assertive manhood his own emancipation proclamation. And with a spirit straining toward true self-esteem, the Negro must boldly throw off the manacles of self-abregation and say to himself and to the world, 'I am somebody. I am a person. I am a man with dignity and honor. I have a rich history, however painful and exploited that history has been.'"

I know it's not all Natives that give Native Pride a bad name. We need to stay together, because the stronger we are as a group, the stronger we can be as individuals. We won't have to rely on each other so much. I also know that we aren't the only race who acts like this, but the whites here don't go around saying "white pride" and using their ethnicity as a weapon. The truth is I'm not concerned about them. I am concerned about my people.

It must be said. The behavior of these individuals is not Native. Native values are to respect and honor everything and everyone, even people who are ignorant of our culture. A true Native lives life through the seven teachings. They are Wisdom, Love, Respect, Bravery, Honesty, Humility, and Truth. Native Pride is using the four medicines everyday whether it's putting out tobacco, smudging ourselves with sage or sweet grass, or putting cedar above all the windows in our houses.

We can't forget that most people are ignorant of our values and ways of life. Most people don't care; that doesn't mean we shouldn't either. We shouldn't hold it against them. We shouldn't make them blind of our values with bad attitudes and living carelessly. Along with their ignorance, our own ignorance causes us to forget our old ways of life: the true Anishinaabe way of life.

We have lost so much already. We have been losing a little bit every year for hundreds of years. Let's not throw the rest away. I am so proud to be Native and love being with my people. But I hate to see a behavior that I can't be proud of.

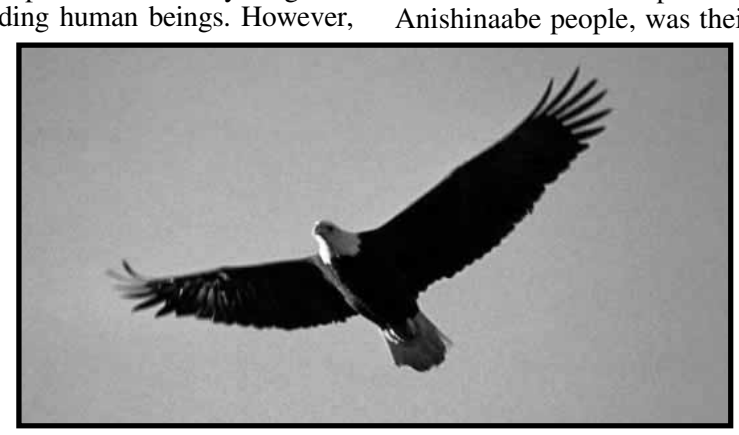
I challenge every Native in this school to be better ambassadors of the Anishinaabe. Having Native Pride means not only showing respect for our own culture, but for all cultures.

We've been talking the talk; now let's walk the walk.

How did it all begin? "The Ojibwe creation story"

By Nee-Gaw-Nee-Gah-Bow, A Wolf Clan member of the Lac Courte Oreilles Ojibwe Band

Throughout the ages, humans have always attempted to understand how everything we hear, see and feel began. The universe, the earth and the life on the earth—where did this all come from? The Bible explained that everything was created by a Supreme Being in seven days, including human beings. However, modern scientific research and criterion refute simplistic explanations and models.



The Ojibwe creation story cannot be scientifically refuted because the explanation is spiritual, and the model is life itself. It is almost as though the Ojibwe creation story substantiates the scientific criterion and model.

There was a time of complete darkness, void and vacuum, where only the Great Spirit Power existed. Therefore, there was a beginning, but there will never be an end. So here is the Ojibwe creation legend.

In the void the Great Spirit Power insights a vision consisting of the entire universe, the earth, and all forms of life, including human beings. All life was created each for a specific balancing purpose and equal in all respects. All life must be in balance in order to continue forever. Human beings being born and eventually dying are a good example of one form of balance.

All forms of creation are alive and living, even the whole universe and earth because they have all been created from the Great Spirit Power. The Great Spirit Power is called the Creator in spoken Ojibwe.

The balancing phenomenon began with the order of creation itself. The first order of creation was the appearance of the universe with all the stars, galaxies, comets, black holes, solar systems, planets, moons, and the earth. One of the objects in our solar system is the Sun, a star which gives light and heat to earth in an otherwise dark and absolute cold universe.

The first order of creation began with a noise in the bleakness of the void. What we hear today when we hear the sacred rattle shake is the noise that occurred at the very beginning of the first order of creation and the beginning of creation itself. This is why we shake the sacred rattle before every prayer or ceremony. It reminds us in a sacred way to know how it all began and that whatever we do in a sacred way is like the creation of something new in view of all the Spirits.

The second order of creation was the placing of all growth on the face of the earth—all the vegetation, trees, grass, plants, water-growths—many of which are medicine for the healing of the human body and mind. Because some of this vegetation contains the power of healing, only certain individuals are blessed with the power of healing. They are like the vegetation which contains the power of healing, whereby these medicine people have the power to diagnose sickness or imbalance in the human body or mind and correct the imbalance or sickness with doctoring techniques and/or the administering of medicine which they know from the vegetation. Only certain individuals are blessed with the knowledge of the vegetation from the earth and possess the power of doctoring.

The third order of creation was the bringing into existence all the animals, birds, fish, and even the insects. These forms of life came to bring strength of survival to the Anishinaabe people and be the messenger between them and the Creator. Their most important contribution, which they made to the survival of the Anishinaabe people, was their comprising a majority of the sacred clans of the Anishinaabe people. The legend of the clans, the clan families and system is a dissertation in itself, which I will reserve for maybe a future description.

The fourth order of creation was the creation of the Anishinaabe, the first human beings. They were created with weakness of power compared to other forms of creation. Birds have the power to migrate thousands of miles from the north to the south without the use of a compass or map. Beavers and other ground animals have the power to know the extremities of the coming winters and, therefore, build their shelters accordingly. Human beings do not possess these powers. Therefore, they are the most dependent and needy of all of God's creation. The Creator had concern for the human beings because of their weak state of being, so the Creator brought all forms of moving life together and asked for a volunteer to watch over and take care of the weak human beings. After the first call with no response, the Creator called again the second time, and this time the huge and magnificent bald eagle flapped his wings (nee-ondah-wade) and came forward. This is why the Anishinaabe honor and respect the great bald eagle (meh-gis-zee). All sacred ceremonies involve the eagle feather, including simple prayer in which the eagle feather should always be present, if not actually held in the hand. The eagle, therefore, is the messenger (iish-ska-bay-wis) of the Creator. When trying to communicate with the Creator (prayer), some Anishinaabe will speak to the eagle first, who will then convey the prayer message to the Creator. The sacred eagle always has the power to communicate immediately and directly with the Creator.

The fifth order of creation was the instilling of all the power of laws, which govern the movement of all the objects in the universe and all the laws that govern the emotions and intellect of the human beings. For example, the emotions of love, hate, and resentment are governed by laws, which always manifest balance.

The sequence of the orders of Creation is for the purpose of maintaining balance in the overall creation. For example, if vegetation were removed, animals would not survive, and if animals were removed, human beings would not survive. This is the balance and why the Anishinaabe take care of the vegetation and animals so extensively, even to the extent that other races of people believe that Anishinaabe are worshipping plants and animals. Some Anishinaabe have the spiritual power to speak to trees and buffalo, plants and animals. Everything is alive spiritually.

Fimis Scriptus!

Tribal hatcheries released over 76 million fish in both on and off-reservation waters in 2003

Tribe Hatchery/Rearing Component	Walleye Fry	Walleye Fgl.	Muskellunge Fry	Muskellunge Fgl.	Lake Sturgeon	Largemouth Bass	Whitefish/ Tullibee	Brook Brown Rainbow Trout**	Lake Trout	White Sucker	Total
Bad River	15,000,000	265,000									15,265,000
Grand Portage								50,000			50,000
Keweenaw Bay	64,282							94,171	93,000		251,453
Lac Courte Oreilles	2,400,000	1,150	40,000	168							2,441,318
Lac du Flambeau	6,000,000	145,033	289,996	550				98,000		4,000,000	10,533,579
Lac Vieux Desert	2,500,000	125									2,500,125
Leech Lake	6,935,125	259,877					31,302				7,226,304
Menominee	400,000*										400,000
Red Cliff		2,245						258,150			260,395
Red Lake	32,600,000	12,000				6,000					32,618,000
Sault Ste. Marie	2,500,000	1,229,355									3,729,355
St. Croix	292,158	455,370									747,528
White Earth		255,086			3,700						258,786
TOTALS	68,691,565	2,625,241	329,996	718	3,700	6,000	31,302	500,321	93,000	4,000,000	76,281,843

* Fish produced or obtained by the U.S. Fish & Wildlife Service

** Total number of one or combination of trout species

Ziigwan—It is spring

Ninjiibaakwewikwew. Ninjiibaakwemin. Ziigwang, Anishinaabeg iskigamizigewag. Mii dash ombigamizigewaad. Giizhigamizigewaad, nase'igewag naseyaawangwaaning. Mii dash na'enimowaad izkigamizige-makakong. Gemaa ziiga'iganikewag. Anishinaabe-ziinzibaakwad wiishkobipogwad.

(I am a female cook. We cook. When it is spring, Ojibwe people they boil down maple sap. And then they boil the sap to sugar. When they finish boiling, they stir to form sugar in a sugaring trough. And then they store it away in a sugar-basket. Or they make sugar cones/cakes. Maple sugar tastes sweet.)

Bezhig—1

OJIBWEMOWIN
(Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
W<u>aa</u>boo—as in f<u>a</u>ther
Bindig<u>e</u>n—as in j<u>a</u>y
G<u>ii</u>zhik—as in s<u>ee</u>n
Nab<u>oo</u>b—as in m<u>oo</u>n

—Short Vowels: A, I, O
D<u>a</u>sh—as in <u>a</u>bout
<u>I</u>maa—as in t<u>i</u>n
Endas<u>o</u> - as in <u>o</u>nly

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

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

Noun Locatives

Adding a suffix ang, ing, or ong to a noun will denote location; to the, at the, from the, in the....

waakaa'igan—(an house) (s)
Waakaa'igan<u>ing</u>—<u>to the</u> house
adoopowin (an)—table (s)
adoopowin<u>ing</u>—<u>at the</u> table
adaawewigamig (oon)—store (s)
adaawewigami<u>gong</u>—<u>to the</u> store
dewe'igan (ag)—drum (s)
dewe'igan<u>ing</u>—<u>at the</u> drum
oodena (wan)—town (s)
oodena<u>ang</u>—<u>in the</u> town

Niizh—2

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

A. Endaso <u>giizhik</u> jiibaakwewigamigong <u>nimbigozige</u>.

B. <u>Gigizheb</u> nookomis gii-paakwezhiganike.

C. <u>Mewinzha</u> mindimooyeyag ogii-wawiinge'aawaa' abwaajiganan.

D. <u>Noongom</u> jiibwaakwewikweg ozaasakokwaanaawaa' zaasakokwaanan.

E. <u>Gibakade</u> na? Biindigen! Namadabin!

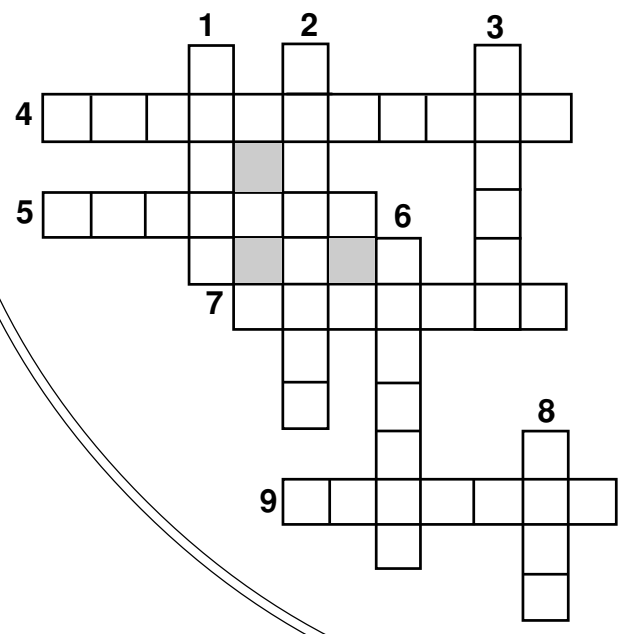
F. Niwii-miijin <u>i'iw naboob</u>.

G. Giwii-minikwe na <u>makade-mashkiki-waaboo</u>?

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

Niswi—3

IKIDOWIN ODAMINOWIN (word play)



Down:
1. Or
2. You are hungry.
3. Egg
6. Frying pan
8. And

Across:
4. They stir to form sugar.
5. Dish
7. In the morning
9. It is spring.

Niiwin—4

Locative Usage

Gizhaabikizigan (an)—stove (s),
Gizhaabikiziganing—at the, on the stove
Mikwamii-makak (oon)—Fridge, ice-box (es)
Mikwamii-makakong—in the, to the fridge
Ishkode—fire
Ishkodeng—in the, to the fire
Abwewin—frying pan
Abwewining—in the frying pan
Onaagan—dish
Onaaganing—in the dish

Goojitoon! Try it!
Translation below.

–ing

–ong

–ang

–ng

1. Nimiijinan miinan adoopowin_____.
2. Nimaamaa obiina'aanan waawanoon abwewin_____.
3. Waabang ina giwii-izhaa oodena____?
4. Bijiinaago Sue ogii-chiibaakwe'aanan wiiyaas ishkode_____.
5. Rob idash Tony anokiiwag adaawewigamig_____.

Translations:
<u>Niizh—2</u> **A.** Every day in the kitchen I bake things. **B.** In the morning my Grandmother she made bread. **C.** A long time ago elder women made bread over an open fire. **D.** Today cooks they fry fry bread. **E.** Are you hungry? Come in! Sit down! **F.** I want to eat that soup. **G.** Do you want to drink black-medicine-liquid (coffee)?
<u>Niswi—3</u> **Down:** **1.** Gemaa **2.** Gibakade **3.** Waawan **6.** Abwewin **8.** Dash **Across:** **4.** Nase'igewag **5.** Onaagan **7.** Waabang **9.** Ziigwan
<u>Niiwin—4</u> **1.** I eat blueberries <u>at the</u> table. **2.** My mother put in eggs <u>in the</u> frying pan. **3.** Tomorrow do you want to go <u>to the</u> town? **4.** Yesterday Sue she cooked meat <u>in the</u> fire. **5.** Rob and Tony are working <u>at the</u> store.

Kids' page: Nature news
Furry animals that change coats

Waabooz (showshoe hare) and zhingos (weasel)

Spring is soon to come, and you may be thinking about changing coats. You will put away your heavy winter coat and take out a lighter weight one for spring. Animals also change coats in spring and fall. They shed their heavy winter coat in the spring and grow back a thicker coat each winter.

A few animals also change the color of their coat two times a year. In the fall they change from a thin, brown coat to a thick, white coat. When it starts to get warm again, they change back to the thinner, brown coat.

In our area of northern Minnesota, Wisconsin and Michigan, these animals are the zhingos (weasel) and waabooz (snowshoe hare). Actually, there are many types of weasels and only the short-tailed ermine and the least weasel change coat color, except for the least weasels that live in the southern parts of the United States. They stay brown all year long.

Wabooz (snowshoe hare).

Why do these animals change coats?

They change their coats twice a year to blend into the world around them. This is called camouflage. If they are sporting a white coat in the snowy wintertime, it will be more difficult for other animals to see them. Fox, coyotes, fishers, and wolves all enjoy a snowshoe hare or a weasel for lunch, if they can catch one. So it is important for them to remain hidden. In the spring and summer with the white snow all gone, the wooded areas where they live turn earthy brown colors and so do the coats of weasels and snowshoe hares. But weasels and hares cannot change coats as quickly as you do. It may take up to ten weeks for the coat to slowly change color and weight.

What's the difference between a hare and a rabbit?

Rabbits do not change their coat color in the winter and spring like the snowshoe hare. The hare also has very large hind feet, longer ears and longer hind legs. The long hind legs help it stand up and reach higher branches, for they love to nibble buds from trees and also like to gnaw on bark. Hare babies, called leverets, are born with fur and with their eyes open, unlike rabbit babies.

The snowshoe hare is usually larger than a cottontail rabbit, but smaller than a jackrabbit. The hare generally weighs about 2-4 pounds and is about 15" long.

Why is it called a "snowshoe" hare?

During the winter the snowshoe hare grows very thick fur on its feet with very stiff hairs that work like a snowshoe, helping the hare travel over snowy ground without sinking into the snow.

With it long back legs and large hind feet, a snowshoe hare can run up to 27 mph and travel ten feet in one leap.

Zhingos (weasel).

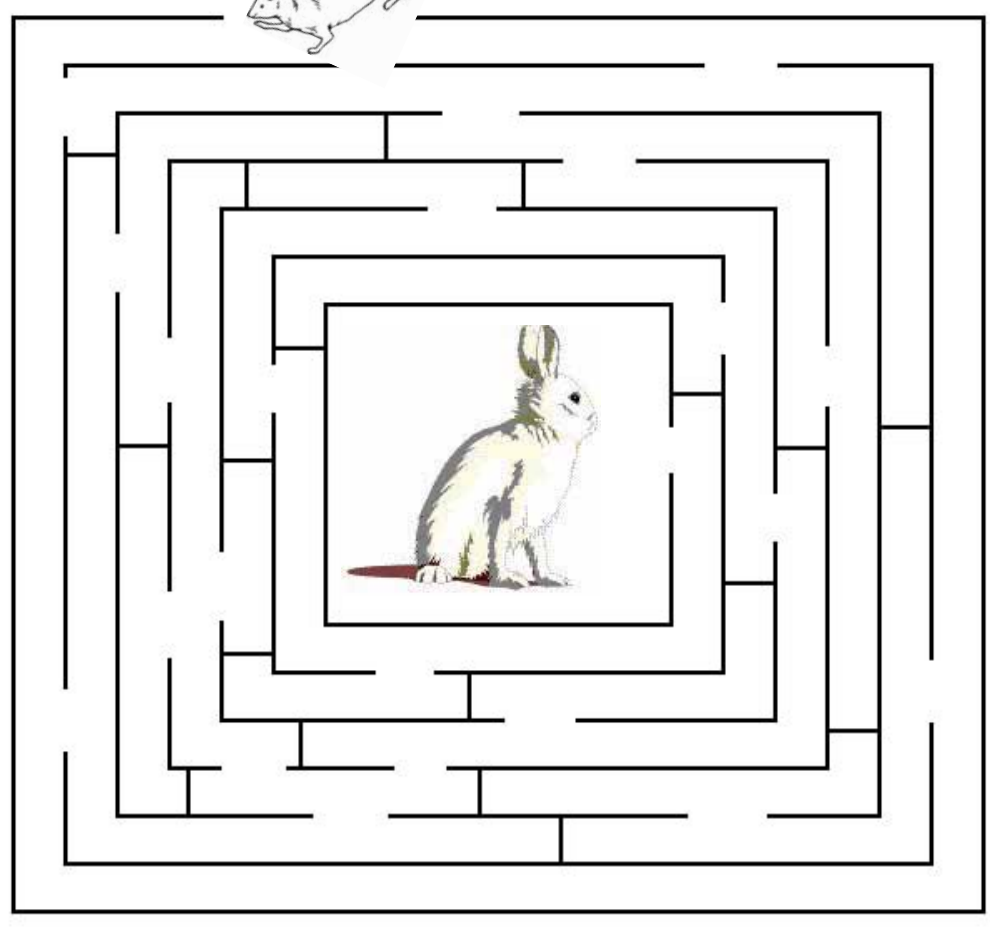
Weasels will eat rabbits and hares.

Snowshoe hare have to watch out for weasels. Weasels are small, but very fast little animals, usually weighing less than one pound. They have long bodies with short legs and long tails.

Weasels like to eat mice and moles, but the larger male weasels will try to catch rabbits and hares as well. Their long, thin bodies make it easy for them to go down holes where rabbits or mice may be hiding!

(Information taken from the Wisconsin Department of Natural Resources website and the University of Michigan's Animal Diversity website.)

Can you help the zhingos get to the wabooz?



Summer harvest opportunities

Introduction

During 2000 and 2001, GLIFWC staff interviewed tribal elders regarding non-medicinal uses of plants. With approval from the elders, we have decided to share this information as a regular feature in *Mazina'igan* in the form of a harvest calendar.

In this issue, the harvest calendar is devoted to those plants that may be gathered for non-medicinal uses during the upcoming summer months of ode'imini-giizis, time for picking strawberry moon (June); aabita-niibino-giizis, half way through the summer moon (July); and manoominike-giizis, ricing moon (August).

Fruits and Nuts

raw, jams, jellies, pie fillings, breads, pancakes

miskominan—raspberries
oshkizhaanimuk—dewberries
odaatagaagominag—blackberries
miinan—blueberries
ode'iminan—strawberries
gozigaakominag—juneberries
bibigweminan—elderberries
datgaagminan—thimbleberries
*black haw berries
ookweminan—black cherries
asasaweminan—choke cherries
bawe'iminan—pin cherries
sewa'kominan—sand cherries
zhaabominan—currants
bagwaji bagesaanag—wild plums
bagaan—hazelnuts

Packing Materials

for berry gathering

waagoga—ferns
aasaakamigoon—mosses

Grains

casseroles, soups, breads, pancakes

manoomin—wild rice

Roots

roasted, sauteed, steamed, boiled

bagwaji zhigaagawinzhiig—wild leeks
bagwaji zhigaagananzhiig—wild onions
apakweshkway ojiibikan—cattail roots
anaakanashk ojiibikan—bulrush roots
anaakanashk ojiibikan—rush roots
doodooshaaboojiibikan ojiibikan—dandelion roots
namepin ojiibikan—wild ginger roots

Greens

raw, sauteed, steamed, boiled

*watercress leaves
*pigweed leaves
*aster leaves
*beach peas
anajiiminan—wild peas
*wild asparagus stems

Disclaimer

While the list identifies those plants that can be harvested during the summer months, we strongly recommend that before you pick them, you meet with elders in your community to talk about proper ways of harvesting, times of harvesting and proper preparation of the plants before eating them.

This is important because some plants need to be harvested in certain ways to ensure that they will continue to grow, while other plants need to be properly washed and prepared prior to eating or using them. In addition, those elders can also help you in different uses of these plants.

Miigwech to those speakers in Mille Lacs, Minnesota and Lac du Flambeau, Wisconsin for their help in providing us with the Ojibwe names for these plants.

***We have been unable to find the names for these plants in Ojibwemowin.**

Tea

namewashkoons aniibiishan—spearmint leaves
*peppermint leaves
ozaawaaskined aniibiishan—horsemint leaves
sasap kwanins aniibiishan—wild bergamot leaves
miskomin(an) aniibiishan—raspberry leaves
ode'imin aniibiishan—strawberry leaves
odaatagaagomin aniibiishan—blackberry leaves
miinan aniibiishan—blueberry leaves
apakwanagemag aniibiishan—red pine leaves (new growth)
wiinisiibag aniibiishan—wintergreen leaves
mashkigobag aniibiishan—swamp (Labrador) tea leaves
kaakaagiwanzh aniibiishan—hemlock leaves
zhingob aniibiishan—balsam fir leaves
giizhik aniibiishan—white cedar leaves
nessibag waabigwaniin—clover flowers
sasap kwanins waabigwaniin—wild bergamot flowers
doodooshaaboojiibik waabigwaniin—dandelion flowers
miskominan—raspberries
ode'iminan—strawberries
sewa'kominan—sand cherries
apaakwaanaatig miinesan—sumac fruits
asasaweminan—choke cherries
mishkomin mitigosan—raspberry stems
ookwemin nagek—black cherry bark
asasawemin wategwaanan—choke cherry twigs
wiinzik—yellow birch bud tips
wiigwaas mitig—white (paper) birch bud tips
manoomin—wild rice (ground up)
gagige bag—princess pine
jiisens ojiibikan—ginseng roots
doodooshaaboojiibik ojiibikan—dandelion roots
wiigob ojiibikan—basswood roots

Wine

doodooshaaboojiibik waabiginiin—dandelion flowers
mashkiigiminag—cranberries
bibigweminan—elderberries
asasaweminan—choke cherries
zhaabomin—currants

Cold juices and drinks

miskominan—raspberries
odaatagaagominag—blackberries
miinan—blueberries
ode'iminan—strawberries
asasaweminan—choke cherries
bawe'iminan—pin cherries
mushkigominag—cranberries
bagwaji bagesaan—wild plums
bagwaj zhoominan—wild grapes
zhaabominan—currants
apaakwaanaatig miinesan—sumac fruits
ozaawaaskined nibi—honeysuckle flower nectar

More gathering opportunities

Tobacco
nessibag aniibishan—clover leaves
doodooshaaboojiibik aniibishan—dandelion leaves
bagaaniminzh aniibishan—hazelnut leaves
datgaawanzh aniibishan—thimbleberry leaves
*pigweed leaves
wiinisiibag aniibiishan—wintergreen leaves
miskwaabiimizh aniibishan—red willow (kinnickinnick) bark
wiigob ojiibikan—basswood roots

Perfumes
namewashkoons aniibishan—spearmint leaves
wiingushk aniibishan—sweet grass leaves

Lipstick
bibigweminan—elderberries (mixed with tallow)

Hair conditioners
sasap kwanins—wild bergamont
waasakonek—goldenrod flowers
mashkodewashk aniibishan—wild sage leaves
giizhik aniibishan—white cedar leaves
gibaime'nuna'gwus aniibishan—sweet fern leaves (keeps hair black)
bagwaji zhoomin biimaakwadoon—wild grape vines

Insect repellents
namewashkoons aniibishan—spearmint leaves
*peppermint leaves
sasap kwanins aniibishan—wild bergamot leaves
giizhik aniibishan—white cedar leaves
miskwaabiimizh waaboo—red willow sap

Dyes
odaatagaagominan—blackberries (dark blue)
miinan—blueberries (dark blue, purple)
gozigaakominag—juneberries (dark red)
bagwaji bagesaanag—wild plums (purple)
bawe'iminan—pin cherries (dark red)
miskominan—raspberries (pink)
ode'iminan—strawberries (red)
asasaweminan—choke cherries (dark red)
bibigweminan—elderberries (purple, red)
zhaabominan—currents (red)
waasakonek—goldenrod flowers (yellow)
*blue iris flowers (purple)
miskondibed waabigwan—Indian paintbrush flowers (red)
*lily flowers (orange)
miskwijiibikan—bloodroots (red, orange, yellow)
waagogan—ferns (green, brown)
aasaakamigoon—mosses (green, brown)
*lichens (orange, purple)

Weaving Materials
mats, baskets, twine
apakweshkway aniibishan—cattail leaves
anaakanashk inaskoon—rush stems
anaakanashk inaskoon—bulrush stems
wiingushk aniibishan—sweet grass leaves
aagimaak misan—black ash wood
wiigob—basswood inner bark

wiigwaas—paper (white) birch bark
lodges, baskets, containers, canoes, caskets, scoops, cradle boards, ornaments, firestarter

First repatriated item arrives at LVD

By Sue Erickson
Staff Writer

Lac Vieux Desert, Mich.—When you walk into offices at the Lac Vieux Desert (LVD) reservation in Michigan, you will see large plastic jugs about two feet high on reception counters asking for penny donations. The jugs are part of the newly established LVD Tribal Historical Preservation Office's (THPO) effort to raise money for a tribal cultural building. Recently granted THPO status by the National Park Service, LVD became one of only 41 THPOs nationally.

Currently, the LVD THPO is staffed by giiwegiizhigookway (Betty) Martin, historic preservation officer and Alina McGeshick, historic preservation assistant, who already have their work cut out for them.

On the heels of the new THPO being established, came a once-in-a-lifetime opportunity—the chance to provide a home for an ancient Ojibwe dugout canoe. The whole story is somewhat serendipitous.

McGeshick was at the U.S. Forest Service (USFS) Visitors' Center at Watersmeet, Michigan helping to formulate a new exhibit featuring the seasonal activities of the Ojibwe, when a USFS staff person asked if the tribe would be interested in taking the old, 32' dug-out canoe which had been on display in the Center. McGeshick immediately said yes, excited about the opportunity to bring such an artifact home.

Jay Shifra, a resort owner, originally discovered the canoe in 1953 at the far end of Thousand Island Lake in Gogebic County. It was found at the south end of the lake,completely submerged with a small tree growing out one end it. Shifra managed to get the canoe pulled out and transported to his resort.

Photographs were sent to several Wisconsin historians who believe it was an old Ojibwe dugout canoe built to hold about 20 people. Measuring 32 1/2 feet long, 31 inches in width at the center and 21 inches high, the old white pine dugout weighs about 500 pounds. Considering its size and weight, movement and placement of the artifact becomes a major project, as McGeshick and Martin found out.

They needed to get the dugout off the Visitors' Centers' premises quickly to make way for renovations. The largest trailer available through the tribe was about 20 feet long, Martin says, short about 12 feet. However, that was the best available.

They arrived at the Center on March 2, a contingency of about six or seven people, when they realized this operation would require a few more hands to accomplish. Then, out of the blue, about twenty prisoners from Camp Ojibwe arrived at the Center, actually bound for another work site. How serendipitous!

Prison staff allowed the men to help remove the dugout, ten men on each side of the old artifact. They gently placed it on the twenty-foot trailer driven by the LVD Construction crew, and with baited breath, Martin and McGeshick drove slowly behind the truck and trailer to a storage building behind the casino. "It seemed like half of the canoe was hanging off the back end of the trailer," McGeshick says. "I was so afraid it would just break in half."

But it arrived safely to its destination, and the Camp Ojibwe prisoners, who also followed them there, marched the dugout into its temporary home in the storage building. "Its size makes it a difficult item to place somewhere,"

Alina McGeshick (left), Lac Vieux Desert historic preservation assistant, and giiwegiizhigookway (Betty) Martin, historic preservation officer, stand before the old dugout canoe. Martin is hopeful that a facility to house the artifact will soon be available. (Photo submitted by Lac Vieux Desert)

Martin says. However, she is hopeful that a facility for this artifact and others to follow will soon be available to the THPO.

The canoe has never been dated, so there is some historic data gathering to be done on the old dugout. There is some conjecture that the dugout was actually burned out and then smoothed over, although there appears to be some axe marks on the prow. Oddly, it also has two 31inch, iron support bars in the middle and one iron oar hole. Historians suggest that the dugout was possibly used during logging activities as well.

LVD's THPO plan to contact the Canadian Conservation Organization in Ottawa, which provides on-site assistance in developing archeological information, preservation techniques and training. Hopefully, they will be able to date the dugout.

Repatriation of tribal artifacts usually does not come so easily, Martin comments. The tribe is involved in several other repatriation efforts, including the return of an LVD water drum that is currently at the Milwaukee Public Museum and a ceremonial spoon and a headdress associated with the Big Drum, both at the Wisconsin State Historical Society in Madison.

Plans are underway to map all tribal lands, identify gravesites as well as all other culturally significant and sensitive areas of the LVD lands and reservation.

The THPO will be working with tribal elders on site identifications.

GLIFWC to survey inland waters for aquatic nuisance species

By Miles Falck, GLIFWC Wildlife Biologist

Odanah, Wis.—This summer, Great Lakes Indian Fish & Wildlife Commission (GLIFWC) staff will be surveying inland waters for Aquatic Nuisance Species (ANS). ANS are species that have been introduced from other regions and disrupt native ecosystems. Common examples include purple loosestrife, Eurasian water-milfoil, and zebra mussels. Some recent arrivals in northern Wisconsin's inland waters include the spiny water flea in Iron County's Gile Flowage and zebra mussels in Lake Metonga in Forest County.

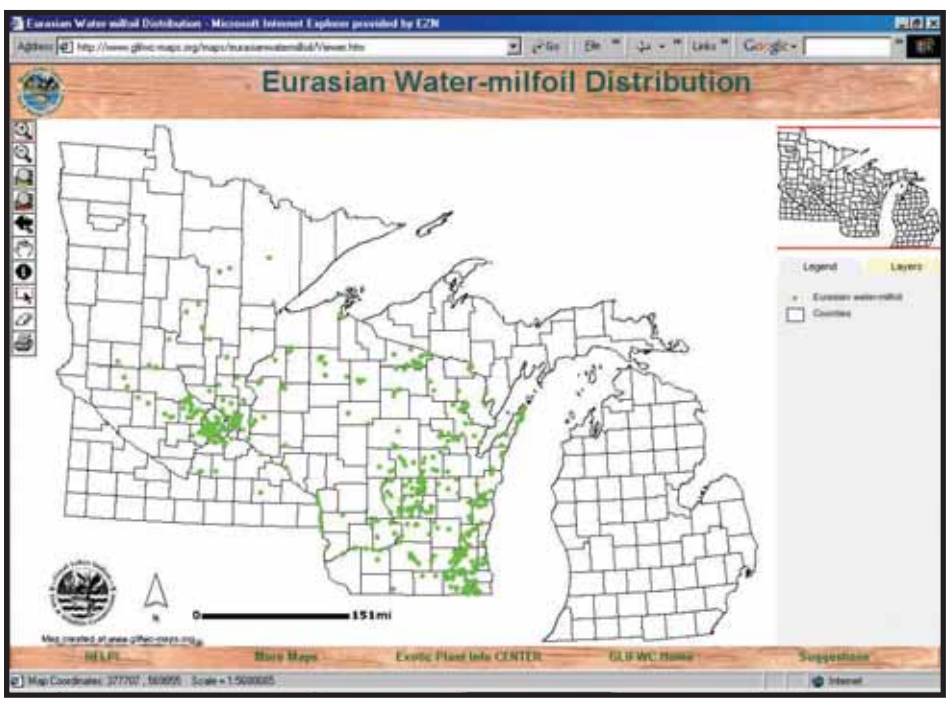
Many of these species have been introduced via ballast water in ocean-going ships that sail the Great Lakes. Once these organisms become established in the Great Lakes, they find their way into inland waters by hitch-hiking in bait buckets, live-wells, boat trailers, and other equipment. The spread of ANS species can be checked by following these simple procedures:

- ❀ Remove any visible mud, plants, fish or animals before transporting equipment.
- ❀ Eliminate water from equipment before transporting.
- ❀ Clean and dry anything that came in contact with water.
- ❀ Never release plants, fish or animals into a body of water unless they came out of that body of water.

Many boat landings have been posted to remind boaters of the need to clean equipment before transporting it, but many boat landings remain unposted. GLIFWC will be working cooperatively with the Wisconsin Department of Natural Resources (WDNR) and other cooperators to inventory and post boat landings this summer.

ANS surveys planned for this summer will target waters with significant treaty resources such as wild rice or walleye lakes and waters in close proximity to infested waters. This work will also be coordinated with WDNR, other cooperating groups and citizen volunteers to avoid duplicating efforts. Crews will be searching primarily for non-native plant species.

Results from the surveys will be compiled and published on GLIFWC's Internet Geographic Information Systems website (http://www.glifwc-maps.org). Purple loosestrife, Eurasian water-milfoil and zebra mussel distribution data have already been compiled from various sources and published on the site to help coordinate survey and management efforts. The website allows users to view and print custom maps and query the online database for each species.



**Michigan data unavailable*

Eurasian water-milfoil.

Stopping the spread of buckthorn

(Continued from page 7)

outer (dark) and inner (light-colored) bark (cambium) are both removed, or the plant may survive. The stem should be checked after a few weeks to make sure that bark has not started to regrow across the gap, and any new sprouts should be cut off.

Girdling prevents the sugars produced by the leaves from being transported down to the roots, while water and minerals continue to move upward through the wood (xylem) into the foliage. Eventually the roots starve, killing the entire plant. Large plants with significant food reserves stored in their roots may take a year to succumb.

Buckthorn seedlings have shallow root systems, and first-year seedlings are easily hand-pulled. Small plants up to 0.5 inches in stem diameter can often be pulled when the soil is moist. Bigger plants up to about 1.5 inches in diameter can be dug or pulled with a weed wrench. (A weed wrench is sort of like a dolly for moving boxes, etc., but with a pair of jaws like a large pliers where the platform would be.) Plants bigger than this may present a significant challenge for the weed warrior. After digging or pulling plants, disturbed soil should be tamped down to reduce seedling establishment.

Chemical control

Pesticides should be used with great care, and then only when other methods of control are not practical or possible and when the benefits outweigh the risks. Spraying should only be done when winds are calm and when rain is not expected for at least a day or so. Care should be taken to, as much as possible, avoid spraying surrounding vegetation. The directions on the label should always be followed carefully.

The best time for chemical control is in the fall, when most native plants are entering dormancy and Eurasian buckthorns are still green. At this time, buckthorn plants are easily spotted and recognized. They are also still highly susceptible to herbicides, while the native vegetation is resistant to most herbicides at this time.

Buckthorns are usually treated by spraying or painting the cut stumps. Foliar spraying is less effective than stump or bark treatments and is usually not recommended to control buckthorns.

Cultural control

Fire may be the best method for controlling common and glossy buckthorn in prairies and other fire-adapted communities. Buckthorn seedlings are highly susceptible to fire, and spring burning will mostly eliminate them. Burning can also remove the stems of larger plants. Established plants resprout vigorously, though, so burning must be repeated every year for five years or more for good results.

While common buckthorn is usually infrequent in wetlands, flooding can sometimes be used to control wetland plants. Care must be taken to not raise water levels abnormally high, or more harm than good may be done to the native wetland plants and animals.

Biological control

In 2002 the Minnesota Department of Natural Resources initiated a study to see whether biological control of these two buckthorn species in North America would be possible. This research is being conducted by the Center for Applied Bioscience International in Switzerland (CABI). So far, about a dozen different insect species have shown promise as control agents. Raising test plant species (including the native buckthorns described above) and testing these insects to make sure they only harm common and glossy buckthorn may take ten years or more.

Reuniting common and glossy buckthorn with their natural predators won't completely eradicate these plants from North America. But a rough "balance" will eventually be reached between these insects and their natural host, putting these buckthorns on an equal footing with the native plants and diminishing their ability to invade and dominate native vegetation.

Reporting

If you notice common buckthorn on public land, it can be reported to the appropriate agency: the U.S. Forest Service (USFS), the Wisconsin Department of Natural Resources, GLIFWC, or a tribal natural resource department.

For more information

This article was adapted from a more detailed article posted on GLIFWC's website—see http://www.glifwc.org/epicenter/. Literature references for this article are listed at http://www.glifwc.org/epicenter/Rhamnus_cathartica/refs.html. Links to other websites on common buckthorn appear at http://www.glifwc.org/epicenter/Rhamnus_cathartica/links.html.

Information on weed control can be found in the *TNC Weed Control Methods Handbook* at http://tncweeds.ucdavis.edu/handbook.html. Girdling is described in Chapter 1 at http://tncweeds.ucdavis.edu/products/handbook/03.ManualMechanical.pdf.

Another good resource is the *Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants* by the Wisconsin Department of Natural Resources (1997): http://www.dnr.state.wi.us/org/land/er/invasive/manual_toc.htm.

Tribal fisheries, wildlife projects funded through federal program

GLIFWC tribes receive $1 million

By Charlie Otto Rasmussen
Staff Writer

The U.S. Fish & Wildlife Service (USFWS) recently awarded five GLIFWC member tribes more than one million dollars in grants to conserve and improve natural resources on tribal homelands. Fond du Lac, Bad River, Lac Courte Oreilles, Lac du Flambeau, and Keeweenaw Bay are among the regional tribes to receive the federal grants following a nation-wide competitive selection process.

Secretary of the Interior Gale Norton on January 26 announced that sixty federally recognized tribes would share nearly $14 million under two grant initiatives, the Tribal Landowner Incentive Program and Tribal Wildlife Grant Program. The programs target protection, restoration and management of fish and wildlife habitat to benefit at-risk species, including those federally listed as endangered or threatened.

On the Lac du Flambeau (LdF) reservation, natural resource officials are using a $120,330 Tribal Wildlife Grant award to help launch lake sturgeon restoration efforts on the Bear River and Lac du Flambeau Chain of Lakes. Larry Wawronowitz, LdF fish and wildlife director, said that a handful of dams first created around a century ago have disrupted sturgeon spawning patterns, sharply reducing reproduction.

The Wisconsin Department of Natural Resources—one of a handful of partners in the project—will help collect and transfer eggs from nearby sturgeon populations to the tribal hatchery. Soon after the eggs hatch, the tiny sturgeon will grow to six to eight inches in rearing ponds before being released into reservation waters.

"Very few fish are still in the system, and it will take some time to rebuild the population. This is a long-term project," Wawronowitz said, noting that it takes female lake sturgeon more than 20 years to become sexually mature.

While fisheries-related projects represent the most widespread application of the grant awards among GLIFWC tribes, the USFWS also funded a wild rice restoration project and moose population study requested by Fond du Lac. The tribe received four grants in all.

The USFWS has earmarked another $9 million dollars to fund additional tribal conservation projects in the future. Agency officials expect to issue a request for proposals sometime during summer 2004, inviting tribes to apply for the new project money. Unsuccessful applicants from the recent grant distribution are also encouraged to refine and resubmit their proposals for consideration.

American Indian tribes control more than 52 million acres in the contiguous United States, while Alaska native corporations hold an additional 40 million acres.

For more information about grant opportunities contact Minneapolis–based USFWS tribal liaison John Leonard at (612) 713-5108.

A recent federal grant award will assist several GLIFWC tribes to restore and preserve sensitive wildlife resources. The Lac du Flambeau and Fond du Lac tribes are launching programs to help manage threatened sturgeon populations. (Photo by Charlie Otto Rasmussen)

2004 USFWS Tribal Grant Awards

Tribal Landowner Incentive Program

Fond du Lac — "Fond du Lac Wild Rice Restoration Project," $200,000.

Tribal Wildlife Grant Program

Bad River — "Restoration of the Raymond 'Snooty' Couture Fish Hatchery and Rearing Ponds," $147,784.

Fond du Lac
— "Angler Exploitation of Select Walleye Populations in the 1854 Ceded Territory of Minnesota," $60,920.
— "Moose Population Dynamics and Census Techniques Research," $133,150.
— "Sturgeon Population Study on the Upper St. Louis River," $42,506.

Keweenaw Bay — "Native Species Projects on the L'Anse Indian Reservation and Adjacent Waters," $120,000.

Lac du Flambeau — "Lac du Flambeau Lake Sturgeon Restoration Project on the Lac du Flambeau Chain of Lakes and Bear River," $120,330.

Lac Courte Oreilles — "Lac Courte Oreilles Fisheries Program Development Including Lake and Stream Surveys," $249,800.

Public input needed for draft plan to restore portion of Lake Superior watershed

The U.S. Fish and Wildlife Service (USFWS) has drafted a plan for restoring a portion of the Lake Superior basin in Wisconsin using funds received from settlement with Burlington Northern following a1992 train derailment and chemical spill into the Nemadji River near Superior, Wisconsin.

The chemical spill killed fish and affected other natural resources. The combined draft plan and draft environmental assessment are available for public comment through April 12, 2004.

The draft restoration plan outlines a variety of alternatives that might be used to restore the site and associated wetland and coastal areas. The proposed alternative calls for preservation and restoration of equivalent aquatic habitat focusing on coastal and lakeplain wetlands within the Lake Superior basin in Wisconsin.

Trustees for the natural resources affected by the spill, including the Service, the Bad River Band of Lake Superior Chippewa Indians, and the Red Cliff Band of Lake Superior Chippewa Indians, along with the Fond du Lac Band of Chippewa Indians, worked together to assess damages from the spill and develop the restoration plan.

Fish, wildlife and other resources were injured when a Burlington Northern train derailed in 1992 south of Superior, Wisconsin, releasing 30,000 gallons of a hazardous chemical—called aromatic hydrocarbons—into the Nemadji River.

Following a Natural Resource Damage Assessment (NRDA) by the trustees and negotiations with Burlington Northern, $140,000 was made available to be used for restoration activities.

The goals of NRDA are to restore the affected habitats and resources to the condition that existed prior to the spril and to compensate the public for the loss of use or enjoyment of natural resources. The parties responsible for the contamination are required to pay for these activities.

The USFWS is the principal federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people.

Copies of the draft plan and assessment are available on the Service's website at http://midwest.fws.gov/nepa. Copies are also available at the Bad River and Red Cliff tribal offices.

Comments on the draft may be sent to U.S. Fish and Wildlife Service, Green Bay Ecological Services Field Office, 2661 Scott Tower Drive, New Franken, Wisconsin 54229. Comments may also be faxed to 920-866-1710 or e-mailed to GreenBay@fws.gov.

Water facts

* Globally, more than 2 billion people face water supply shortages. By 2025, that figure is expected to rise to 5.5 billion, two-thirds of the world's population.
* Nearly one-third of prehistoric, postglacial Wisconsin was wetlands. Nearly half of the estimated 10 million acres of pre-settlement wetlands have been lost.
* The Fox River is one of the few rivers in the nation that flow northward.
* Wisconsin uses an average of 56 gallons of water per day per person. The national per capita average is 90 gallons a day.
* It takes 1,500 gallons of water to produce one barrel (31.5 gallons) of beer.
* More than 800 toxic contaminants have been detected in Great Lakes waters and sediment.
* The Great Lakes contain a fifth of all the unfrozen fresh water on the surface of Earth.

(Reprinted from ***Littoral Drift,*** *a publication of Sea Grant.)*

Native American Study majors added to Northland College curriculum

By Sue Erickson
Staff Writer

Joe Rose, Native American Studies program director.

Ashland, Wis. – Students attending Northland College in Ashland, Wisconsin will be able to opt for a Native American Studies major for the first time, much to the delight of Professor Joe Rose, Native American Studies (NAS) program director. For him, the new majors fulfill a long-held personal and professional goal.

The NAS program at Northland began thirty years ago with the arrival of Rose on staff. Rose, along with NAS staff, have steadily built the program, but up to now, students could only minor in NAS or pursue a Native American concentration within a history major.

"The addition of NAS majors greatly enhances our program," Rose says, "and is complementary to the environmental liberal arts emphasis for which Northland is well-known." Actually, two NAS majors are being offered starting next fall. The Native American Studies/Outdoor Education major integrates Native American teachings and skills with those of the Outdoor Education program, and the Native American Studies/Business major provides management and entrepreneurship skills to students interested in business careers or tribal management.

The new majors were first recommended by the Native American Studies Task Force, a group of native and non-native individuals who have been working towards strengthening the college's NAS program over the past two years, Rose says. He also credits support from Northland College President Karen Halbersleben, Dean Less Alldritt and Social Science Division Head Christian Bisson for the final adoption of the two majors.

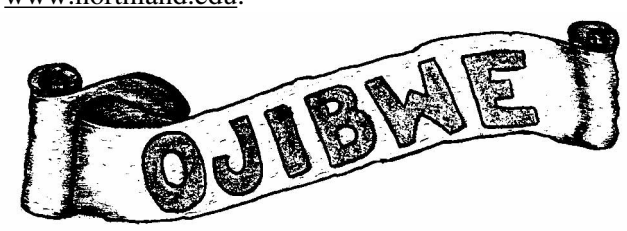
After Rose and Clayton Russell worked on numerous drafts of the core components for the NAS majors, written proposals were submitted to the Dean's Course Approval Committee. From there the proposals were submitted to the Academic Counsel, which gave their final stamp of approval in late December 2003.

The NAS majors feature courses in Native American culture, literature, language, history, philosophy, ethnobiology, and art. The NAS Outdoor Education major also emphasizes experiential skills with a focus on leadership, management, communication, and teaching skills, while the NAS Business major focuses on management skills and tribal relationships with a non-Native society.

In addition to the new majors, the NAS program is in the process of building a new Native American museum on campus that will feature the traditional, seasonal activities of local tribes. The museum is located in Mead Hall, directly across from the NAS staff offices. The museum will sponsor a number of activities and events once it is completed.

Beyond it's core program, the NAS also sponsors the all-campus Thanksgiving Day feast in the fall and Native American Awareness Days and Pow-wow each spring. The 30th annual pow-wow was held on March 20th at the Northland College gym. Native American Awareness Days features a variety of events and activities, including storytellers and guest speakers on Native American topics and issues.

For more information on a NAS major, minor or course offerings see the website at www.northland.edu.



Twolined chestnut borer

(Continued from page 11)

one inch long. Its wormlike, white body is divided into round segments. Two slender, brown projections extend from its last body segment. Adult chestnut borers have a life cycle similar to the emerald ash borer.

Adult chestnut borers lay eggs on the bark of oak trees during late spring and early summer. Within two weeks, the eggs hatch, releasing larvae that bore through the outer bark to feed on the inner bark and sapwood. The larvae overwinter in the outer bark, pupate, and emerge as adult beetles the following spring.

The first visible symptoms on a tree infested by chestnut borers include the discoloration of leaves to a reddish-brown, before the arrival of autumn. Leaves appear small and sparse. Eventually, whole branches experience dieback. Often dieback begins in the upper part of the canopy, giving an infested tree a distinctive "dead, red and green" pattern from top to bottom.

Once dieback occurs, the infestation often cannot be remedied. Insecticides may be justified for select valuable trees, but may prove to be ineffective. In any case, healthy oaks should be resistant to outbreaks of the twolined chestnut borer.

Winnebooshoo finds his way!

By Nee-Gaw-Nee-Gah-Bow
A Wolf Clan member of the
Lac Courte Oreilles
Ojibwe Band

The Anishinabe people had exhausted almost all their meat supply. The meat animals, i.e. the deer, bear, partridge, moose, etc., may not have been plentiful due to a severe winter, so tribal hunters were unable to kill enough animals to meet the necessary tribal demand.

The families were disillusioned and fearful of hunger, lack of adequate clothing, and all the other supplies they derived from animals, such as needles for sewing, bones for utensils, and hides for boots and blankets. Hunting parties after hunting parties returned without much meat. This was getting very serious as winter would soon be approaching.

Winnebooshoo who lived amongst the Anishinaabe and was not unaware of their plight. Winnebooshoo was a spirit-man who could exercise the power of his spirit to find the unknown and make things happen. He was sent and placed to live amongst the Anishinaabe by the Creator to help them in times of despair and to teach them medicine and how to live the good life. So the Anishinaabe called upon him to help them to secure meat and other vital necessities for their survival.

Winnebooshoo knew where all the animals were in a far distant area. He had to go there to try and persuade them to return to their original habitat near the Anishinaabe communities. This would be a very difficult task and journey.

However, Winnebooshoo was determined to help the Anishinaabe. He traveled alone through thick and dark forests, forged treacherous streams and rivers, and climbed steep windy and rocky slopes of big hills. He traveled for many days and only rested a little during the darkness at night. Even though he knew where he was going, he had never traveled this way alone before. In his consistent trek, in what he assumed was the correct direction, he realized that he was lost. Determined to encounter the animals and persuade them to return to the Anishinaabe, he continued his unfounded journey through the uncharted countryside. He began to wonder if, indeed, he was headed in the right direction.

Abruptly he came to an open field where the wind was blowing the tall grass, and the grass looked like it was dancing. So, in spite of his weariness at being lost, he became so happy at seeing the tall grass dance that he started to dance with and amongst the tall grass also.

He was so happy that while he was dancing he laughed, shouted war hoops, and sang. He was so elated that he even forgot that he was in search of animals. He danced like this for a long time with the tall grass, but before it got dark, he spotted animals at the other end of the open field. Now the animals were so overjoyed to see Winnebooshoo, so happy that they were eager to go back home amongst the Anishinaabe People. And they did along with Winnebooshoo. The Anishinaabe People survived the winter in peace and comfort.

How do you interpret this Winnebooshoo story into things that are happening in your life? Every Winnebooshoo story has a moral. The interpretation and moral is not always the same for everyone.

This Winnebooshoo story tells me that powerful spirits can have negative emotions and even get lost. Sometimes I get lost in my search for something that I really need in my life. However, in despair something will come along which I least expect and make me so happy to the extent that what I needed was bestowed upon me without even trying. Thanks to the spirits for having a lot of fun with me also.

Native American tribal leaders: Proud, skillful treaty negotiators

Mount Pleasant, Mich.—The lives and times of Native American tribal leaders in the Great Lakes region who signed treaties with the federal government in the 1820s are featured in a new Clarke Historical Library exhibit at Central Michigan University.

The exhibit centers on 22 full-color lithographs of Native American leaders drawn by James O. Lewis and printed between 1835 and 1836. The images reveal the proud, detailed profiles of legendary Indian leaders focused on achieving the best possible treaties for their people.

"They are often portrayed as unsophisticated, yet these Indian leaders were actually thoughtful negotiators who employed skills developed during a long history of striking deals between Native Americans and Europeans," said Frank Boles, director of the Clarke Historical Library.

"They were neither simple nor uneducated. They were very proud and sophisticated leaders who knew how to negotiate treaties for the benefit of their people," he said.

The lithographs, purchased by the library at a Chicago auction in 2003, were color prints made from the original, mostly watercolor paintings of the Indian leaders drawn from life at the various treaty ceremonies. The original sketches were destroyed in an 1865 fire at the Smithsonian Institute in Washington, D.C.

The exhibit also features a number of other printed items that shaped relationships between Native Americans and Euro-Americans, including: several books written by Potawatomi leader Simon Pokagon and printed on birch bark; the first copy of the New Testament published in the Ojibwe language, printed in 1833; and a first edition of Henry Wadsworth Longfellow's poem "Song of Hiawatha," which was published in Boston in 1855.

"Native American Treaty Signers in the Great Lakes Region" runs through July 16 in the library's Francis and Mary Lois Molson Gallery. Admission is free and open to the public. For more information visit their website at www.clarke.cmich.edu.

New faces at GLIFWC

By Sue Erickson, Staff Writer

Matt Hudson, environmental biologist

The new year brought several new staff to GLIFWC offices. Among them is Matt Hudson who joined the Biological Services Division as GLIFWC's environmental biologist in January.

Matt Hudson

Hudson hails from West Bend, Wisconsin. He completed his undergraduate studies in water chemistry at UW-Stevens Point and obtained a Masters degree at the University of Minnesota in water resources science with a focus on environmental chemistry.

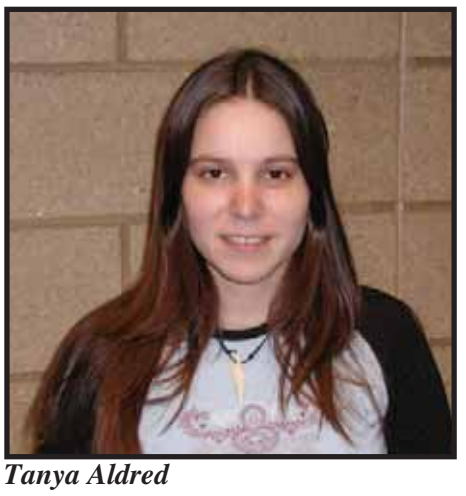
His previous work experience includes a one-year internship as head researcher for a Wisconsin Department of Natural Resources' (WDNR) Lake Planning Grant. This study entailed collecting samples, analysis and compiling the final report. He also worked as a lab technician while at UW-Stevens Point. Other related experience includes a summer internship with the WDNR as a water resources technician, involving him in sample collection and data analysis.

Hudson says he will be providing a voice for GLIFWC regarding environmental chemistry in his current position. Hudson's primary responsibility will be with Great Lakes protection, in particular working with the Lake Superior Binational Program. In the field, he will continue with the annual monitoring of mercury levels in walleye harvested during the spring spearing season and on a lake trout contamination study, which tests for contaminants such as PCBs and DDT.

Hudson is currently living in Ashland and enjoys a variety of outdoor activities during leisure hours, including, but not limited to, backpacking, canoeing, mountaineering, fishing, and skiing.

Tanya Aldred, wild plant/wildlife technician

February 2nd marked the start for Tanya Aldred as GLIFWC's new wild plant/wildlife technician. A Keweenaw Bay tribal member, Aldred calls Ishpeming, Michigan her hometown, but in fact, moved multiple times around the state during her early school years.



Tanya Aldred

She graduated with a Bachelor of Science degree in fisheries and wildlife management from Michigan State University in Lansing in 2001, but soon departed for Australia where she lived and worked for a year and a half in the western Australia outback.

While in Australia she volunteered with the federal Conservation and Land Management Program and also had an opportunity to be involved with dolphin research at the Dolphin Research Center at Bunbury on the Australian west coast.

Other related professional experiences include working on crayfish research in Michigan inland lakes and with the U.S. Fish & Wildlife Service's Sea Lamprey Control Program while pursuing her degree. She also volunteered with the Lamprey Control Program after returning from Australia in September 2003.

In her current position with GLIFWC, she will be working with the long-term understory plant research to determine the impact of logging on understory plants as well as with wildlife management projects. The position entails both data entry and field work.

Aldred lives in Ashland. Her leisure pursuits include a number of outdoor activities, such as snowboarding, hiking, camping and canoeing. She also enjoys yoga and has recently taken up kick boxing.

GLIFWC staff was privileged to observe an Anishinaabe naming ceremony for Sharon Nelis, a Bad River member and program assistant in GLIFWC's Planning and Development Division. Above, Tobasonakwut Kinew passes a pipe to Sharon and speaks her spirit name for the first time, nenaaikiizhiigook, or Healing Sky Woman. Kinew explained that everyone has an Anishinaaabe name which is how one is identified in the spirit world. After moving on from this world, one's Indian name is important in continuing the journey into the next life, he said. While some traditional people frown on open discussion of namings and other ceremonies, Kinew, a spiritual leader from Onigaming, Ontario related that cultural secrecy is a product of assimilation when government policy forced Indian people to renounce their heritage or face punishment. The ceremony took place during All Staff Day on February 26 in Odanah. (Photo by Charlie Otto Rasmussen)

Several GLIFWC staff members who have, or will in 2004, reach 5-10-15-20 year employee status were, back row from the left, Missy Berlin, 10 years; Mike Soulier, 5 years; Mark Bresette, 10 years; Butch Mieloszyk, 20 years; Ken Rusk, 20 years; and Jonathan Gilbert, Ph.D., 20 years. Front row, John Coleman, 10 years; Annette Crowe, 15 years and Sirella Ford, 10 years. Not pictured is Sue Erickson, 20 years. (Photo by Charlie Otto Rasmussen)

Michele Wheeler, inland fisheries biologist

The Biological Services Division welcomed Michele Wheeler to her new position as an inland fisheries biologist in January. Wheeler, a native of Pennsylvania, moved to Ashland, Wisconsin from California, where she has been working on her Master of Science degree in fisheries at Humboldt State University. She obtained her Bachelor of Science degree in environmental resource management at Penn State University, Pennsylvania.

Michele Wheeler

She spent a number of years working in the Pacific Northwest, primarily working with the salmonid fishery. This included several positions with the U.S. Forest Service that involved spawning assessment and restoration, work with water quality monitoring and a position at a University of Washington research station on the Olympic Peninsula evaluating the benefits of restoration projects to the fishery. Wheeler also worked for a private, non-profit organization in an outdoor science education program for youth.

Her husband, Jon, graduated from Northland College in Ashland and the couple had been interested in settling in northern Midwest. This stimulated her interest in the position with GLIFWC as well as an opportunity to work in a situation where one can see your work directly applied.

In her position Wheeler will be supervising assessment crews and coordinating spring adult walleye population estimates and fall walleye recruitment surveys conducted by GLIFWC in Wisconsin and Michigan lakes. She will also be involved with planning and preparation for spring harvest monitoring and various other projects.

Wheeler is kept busy outside of work with ten-month old twin daughters, Lily and Caitlin. She and her husband like fishing, walking in the woods and canoeing. They hope to find time to enjoy these activities in the northland. She also enjoys quilting and woodworking, but since the twins arrived has had little time for leisure pursuits.

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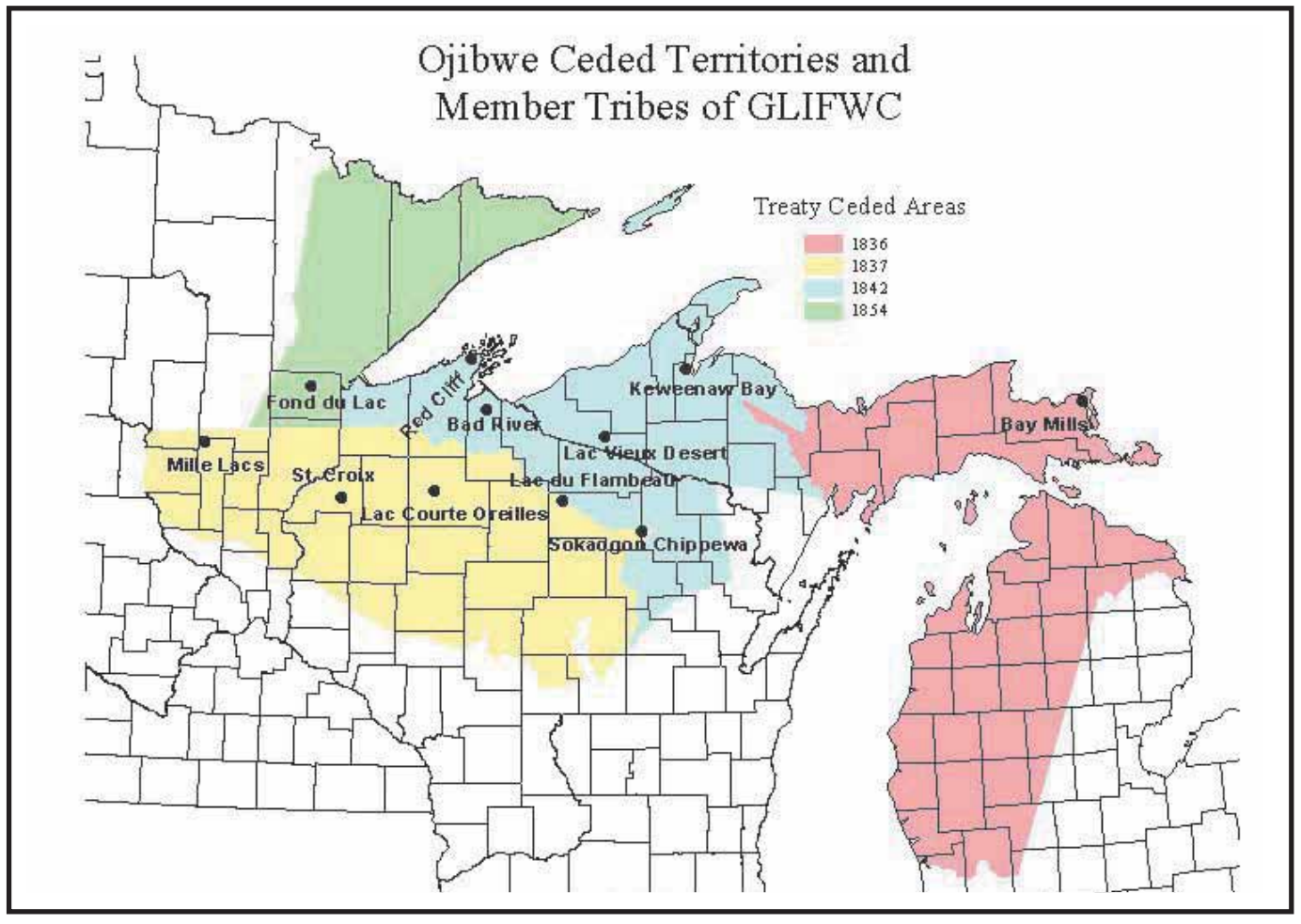

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