High winds plague the spring season but lakes yield a substantial treaty harvest

By Sue Erickson
Staff Writer

Odanah, Wis.—Many tribal netters and spearers were riding the waves this spring as blustery gusts blew cold and hard through the ceded territories, presenting challenging conditions, particularly on the expansive Mille Lacs Lake. Her formidable waves on windward shores often forced netters to set from the leeward landings and limited opportunities to spear.

On the smaller Wisconsin lakes, spearers were also often limited to sheltered shorelines. However, despite the cold and wind, the tribes took home a healthy harvest for 2002.

Joe Dan Rose, Inland Fisheries Section leader, noted that the cold, windy conditions at Mille Lacs were much more prevalent this spring than in the past several years.

“When you think about how many people were out in these conditions each day and night, you are thankful that everyone made it through the season safe and sound.”

Minnesota 1837 Treaty season

From Mille Lacs Lake, the combined total catch of walleye this spring was 52,999 pounds, a little over half of the total tribal walleye quota of 100,000 pounds. This compares to 41,732 pounds of walleye harvested in spring of 2001.

Additional tribal harvest is likely to occur under the 2002 tribal quota for Mille Lacs Lake, which remains in effect until March 31, 2003.

Also harvested this spring from Mille Lacs Lake were: 7,918.7 pounds of northern pike; 990.3 pounds of perch; 64.6 pounds of cisco; and 630.4 pounds of burbot.

Tribes that participated in the spring netting included the Mille Lacs and Fond du Lac Bands from Minnesota and the Bad River, Lac Courte and Fond du Lac Bands from Wisconsin.

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Protesters rally at U of M

By Charlie Otto Rasmussen
Staff Writer

White Earth Ojibwe Paul Schultz (center) talks with a woman at a protest rally at the University of Minnesota on May 20. See page four article “Meddling with manoomin,” for more information on the potential impacts of this research. (Photo by Charlie Otto Rasmussen)

Wild rice genetic research scrutinized by some Ojibwe tribes

By Sue Erickson
Staff Writer

Minneapolis, Minn.—Considered a sacred plant from the Creator, manoomin (wild rice) is arguably the most significant plant among tribes in the greater Lake Superior region. It is both sacred and an immensely important food source for humans, waterfowl and a host of other species. A growing sense of unease over the genetic research and manipulation of wild rice for the agricultural industry, however, has raised concerns that naturally-occurring manoomin—and the cultural values it embodies—could be in jeopardy.

Supported by organizations like the Green Party and the Organic Consumers Association, Ojibwe Indians held a protest rally on May 20 at the University of Minnesota (U of M) where wild rice genetic research has been underway for almost a decade.

“They say they can improve upon this gift the Creator gave us,” said White Earth’s Paul Schultz. “But the potential for catastrophe is just too high.”

Around one-half of the Great Lakes Indian Fish & Wildlife Commission’s (GLIFWC) eleven member bands have passed tribal resolutions opposing the genetic modification of wild rice.

GLIFWC’s Voigt Inter-tribal Task Force (VITF) continues to monitor developments in wild rice research and remains committed to protecting natural manoomin in the 1837 and 1842 ceded territories and wherever it occurs.

“Mother Nature handles her own reproduction and we shouldn’t try to fool her,” said Tom Maulson, Chairman of both GLIFWC’s Board of Commissioners and the VITF. “I think Indian people understand that better than the scientists who are doing this work. Don’t mess with Mother Nature.”

California and Minnesota lead all states in the production of cultivated wild rice—known as paddy rice. University researchers hope to provide paddy farmers with disease resistant varieties of rice that offer high yields. Among the concerns of some tribes is that genetically manipulated wild rice might contaminate natural manoomin, threatening both a cherished food and a cornerstone of traditional Ojibwe life.

At the rally, Winona LaDuke, a White Earth Ojibwe and former Green Party vice presidential candidate, addressed the gathering of around 80 people outside the annual conference of the National Agricultural Biotechnology Council. “The sustainability of our rice is contingent on its diversity. It’s central to our cultural well being, spirituality as well as economically,” she said.

Local singers Thunder Nation and the youth drum from Heart of the Earth Survival School performed drum songs during the two-hour rally.
Over 20,500 walleye tagged at Mille Lacs Lake this spring

By Nick Milroy, GLIFWC
Inland Fisheries Biologist

Mille Lacs, Minn.—The wind blew, and the rain and snow flew during the interagency walleye tagging study conducted this spring on Mille Lacs Lake in Minnesota. In a spring that was dominated by strong winds, big waves, and cold temperatures, electrofishing crews from the Great Lakes Indian Fish & Wildlife Commission (GLIFWC), US Fish and Wildlife Service (USFWS), Fond du Lac Band, and St. Croix Band successfully captured, tagged, and live-released around 12,100 adult walleye at Mille Lacs Lake between April 23 and May 7, 2002.

These electrofishing crews worked late into the night, often along lengthy stretches of unprotected shoreline located miles away from the nearest boat landing to complete the initial marking phase of this three year walleye tagging study.

Given the adverse conditions that greeted these crews nearly every night, their efforts and overall contribution to this important interagency study are both significant and worthy of commendation.

While the electrofishing crews were tagging at night, Minnesota Department of Natural Resources (MDNR) crews were tagging during the day. As a complement to USEWS and tribal use of electrofishing equipment, the MDNR used large trap nets to capture walleye for tagging. Close to 8,400 additional fish were tagged by the MDNR for a grand total of around 20,500 walleye tagged.

Additional walleye will be tagged this year by GLIFWC during their annual spring and fall juvenile walleye surveys and by MDNR personnel aboard state licensed commercial fishing launch boats. This effort should contribute several hundred more newly tagged walleye to the population during 2002.

Fishery staffs from GLIFWC, the tribes, and the MDNR are pleased with the fact that around 20,500 walleye were tagged. This interagency study is expected to provide new insights into the habits, abundance, and size and age structure of the walleye population in this 132,516 acre lake.

Information from tagged walleye will be collected from the tribal harvest in 2002, 2003 and 2004 and during future electrofishing surveys by GLIFWC. The MDNR will collect information from the state angler harvest and through their future survey work. Tribal anglers, spearers and netters should report all tagged walleye they capture to tribal biologists, creel clerks or wardens. Any tags from harvested fish in the possession of tribal members should be sent to GLIFWC, P.O. Box 9, Odanah, WI 54861. They can also be reported by phone at (715) 682-6619 or email (nmilroy@glifwc.org).

GLIFWC conducted an interagency walleye tagging study on Mille Lacs Lake in Minnesota the spring of 2001 (see photo on the right, (kneeling) Don Corbine, Gary Czypinski, Nick Milroy, Jerome Cross and Brian Borkholder. Back row: Neil Kmieciak, Robert Cloud, Dale Corbine, Todd Soulier, Chuck Smoak, Shane Whitehead, Rusty Brown, Sean Thompson, Ed Whitebird, Gary Martineau, Scott Yess and Duane Soulier. Missing from the photo is Joe Dan Rose. (Photo by Sue Erickson.)

Inland fisheries spring walleye population surveys—a success!

By Phil Doepke, GLIFWC
Inland Fisheries biologist

Odanah, Wis.—Inland Fisheries survey crews, undaunted by strong spring winds and cold and wet weather, completed fifteen walleye population estimates in Wisconsin and one in Michigan. They also completed eight walleye length frequency surveys in Wisconsin.

The crews consisted of two boats from GLIFWC, one boat from the St. Croix Tribe, one boat from the Mole Lake Tribe and one boat from the US Fish and Wildlife Service (Ashland). A later spring greeted survey crews, which was a relief as GLIFWC staff scrambled to outfit the four new trucks acquired in late March.

Crews began the surveys on April 18th in Wisconsin and finished on May 5th in Michigan, at which time they were sent to help with the ongoing walleye tagging study being conducted on Mille Lacs Lake in Minnesota.

It was a relatively late start for the spring surveys as the lakes were ice covered until a short stint of unseasonably warm weather in early April helped to force the ice to give way.

Once the lakes were free of ice, the weather cooled which kept lake water temperatures in the high 30’s and low 40’s and held walleye on spawning grounds for an extended period of time.

With more nights to survey lakes, all priority lakes were able to be sampled. Wind and snow returned on a couple nights but survey crews endured cold fingers and icy boat decks to complete their work.

An additional “alternate” lake was also surveyed in Wisconsin. Despite a few nights of near blizzard-like conditions and some extra long nights it was a safe season.

Wisconsin crews put in some extra long nights compensating for crews sent to survey Mille Lacs Lake. GLIFWC sent two electrofishing boats, and a work-up boat to Mille Lacs Lake.

Data are now being entered so it is too early to report any numbers from the surveys. However, the lake surveys turned up many size classes and plenty of small adult walleye. Small fish are likely the result of young fish being recruited into the adult population and are a good indication that there will be plenty of walleye in the future.

Later this year fisheries technicians Ed White and Henry Mieloysky will age spine samples gathered this spring to confirm whether the small walleye are young fish or slow growing older fish.

Another interesting find was a relatively large size of adult males in Kentuck Lake, Vilas County. GLIFWC in cooperation with the USFWS, Mole Lake, Lac des Plaines and Red Cliff Tribes have been working hard to rebuild a collapsed walleye population in this lake.

Kentuck Lake had been suffering from a skewed gender structure, characterized by a few large female walleye and near absence of male walleye. Last year we saw evidence that stocking had provided some young adult male walleye into the population. This year’s survey confirmed this to be the case. Now hopefully those large females and young males can get together and provide some natural reproduction.

GLIFWC would like to provide a special thanks to the tribes which provided assistance and especially the tireless crew from Mole Lake that made the spring 2002 walleye population estimate surveys a success (see photo).
By Sue Erickson
Staff Writer

Odanah, Wis.—Concerns about the possible impacts of Chronic Wasting Disease (CWD) recently documented in 15 deer from western Dane and eastern Iowa Counties in Wisconsin were voiced at the May 2 meeting of the Voigt Intertribal Task Force (VITF) at the Mille Lacs reservation.

While in no way minimizing the potential dangers of CWD to the region’s deer population, Dr. Jonathan Gilbert, GLIFWC Wildlife Section leader, does not believe deer taken from the ceded territories needs to be discarded or that venison cannot continue to be an important, traditional food resource.

So far, incidence of CWD is in locations well removed from the ceded territories, Gilbert says, and there have been no reports of diseased deer in the north as yet. However, more testing needs to be done, and immediate reaction to CWD as a threat is warranted.

GLIFWC will continue to monitor the CWD situation and also cooperate with the State DNR’s test deer harvested by tribes, both on and off reservation, throughout the ceded territories, including Michigan and Minnesota.

GLIFWC will also investigate issues related to brain tanning, which may carry some risks if using CWD infected brains.

The disease is very difficult to eradicate, Gilbert says. Getting rid of CWD is nearly impossible once it occurs in 5% of the deer population. At 1-2% of the population, the only means of possible control is depopulation, which is why the Wisconsin Department of Natural Resources (WDNR) has begun to implement herd reduction in the targeted area.

A closer look at CWD
(Much of the information below was taken from the WDNR website.)

What is CWD?
CWD comes under a family of diseases known as transmissible spongiform encephalopathies (TSEs) that affect the brain and central nervous system.

Other TSE diseases include mad cow disease in cattle; scrapie in sheep, and Creutzfeldt-Jakob Disease (CJD) in humans. Forms of TSEs have also been identified in cats, mink, and goats. CWD is the TSE that occurs in elk, mule deer and white-tailed deer.

The incubation period for CWD extends from 15 months to 15 years. Only very sick animals appear ill. Infected deer may be thin or in poor condition, have the tremors, stumble, or cannot carry their head up straight.

A non-living, abnormal protein, known as a prion causes the disease. It is not caused by germs. However, it is transmitted animal to animal by close contact, such as at crowded feeding areas, or can be picked up in a CWD-contaminated environment.

Simple boiling cannot destroy the prion. Heat in the range of 900 degrees Fahrenheit is necessary to destroy the prion, so common methods of “disinfecting” are not useful with CWD. Bleach is moderately effective in decontaminating, but not 100%.

Diagnosis requires a microscopic examination of a brain sample from a recently killed animal. Brain cell structure is not altered until well after the incubation period. Thus, very young deer (fawns) may be infected but show no clinical signs.

Currently, there is no known method to diagnose a living animal, although researchers are working on developing tests using live tissue biopsies.

Where does CWD come from?
CWD was first documented in the United States in 1963. It first occurred in an elk research pen in Colorado. The research station had held elk in a pen previously holding scrapie-infected sheep. Later, the elk became sick. Since then CWD has been documented in wild deer and elk herds in Colorado, Wyoming and Nebraska.

In addition to deer herd reduction measures and increased testing, Wisconsin plans to impose tougher regulations on the import of elk and deer to Wisconsin from other states and require mandatory testing of all cervids which die in game farms.

Does CWD infect humans?
There is no scientific information indicating CWD does infect humans. Over 16 years of monitoring the infected area of Colorado has yielded no signs of CWD in humans or cattle.

However, the World Health Organization does not recommend consumption of animals with evidence of CWD by either humans or animals. Caution is warranted because there is still much to learn about CWD.

What precautions can be used?
If field dressing deer in areas where CWD is found, use some simple precautions such as:

- Wear rubber gloves.
- Grind out the meat.
- Minimize the handling of brain and spinal tissues.
- Wash hands and instruments thoroughly, using bleach on instruments and cutting surfaces.
- Avoid consuming brain, spinal cord, eyes, spleen, tonsils and lymph nodes of harvested animals.
- Request that your meat be processed individually, without mixing with meat from other animals.

Is brain tanning hides safe?
Ojibwe have traditionally used deer brain in tanning hides. This involves extensive direct contact with the brain tissue, triggering questions as to the safety of this procedure and also of wearing hides tanned with an infected brain.

As said before, there is no evidence of CWD infecting humans, however, since no one is absolutely sure it cannot be transmitted to humans, care should be taken.

It is best not to use brains from infected animals or animals showing questionable symptoms. Again, some precautions are warranted, such as wearing latex gloves when handling the brain tissue. GLIFWC hopes to provide certified disease-free brains for tanning.

What should I do if I suspect an animal has CWD?
Call the local WDNR office or the DNR Wildlife Health Team at 608-221-5375, or call Jonathan Gilbert at GLIFWC’s Wildlife Section at 715-682-6619.

The animal should be killed and disposed of properly. If field dressing deer in areas where CWD is found, use some simple precautions such as:

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The animal should be killed and the head sent in for testing. The remaining carcass should not be disposed of in the woods.

The 2002 Partners in Fishing event featured special guest Green Bay Packers running back Ahman Green (center). Red Cliff hosted the informal gathering May 30-31 which brings together Wisconsin ceded territory fisheries managers, including tribal, federal, and state representatives. Charter boats guided participants on Lake Superior for fairly good fishing that included lake and brown trout, plus coho salmon. (Photo by Charlie Otto Rasmussen)
Meddling with manoomin

U of M wild rice genetic studies triggering concern

By Peter David
GLIFWC Wildlife Biologist

Odanah, Wis.—Differences in cultural values are creating a local battle in part of the world-wide conflict over the genetic modification of food plants. The plant in the middle of the issue here is a simple annual grass.

To the Ojibwe it is manoomin, a wild plant considered a sacred gift from the Creator; it is known as wild rice to non-Indians, most of whom see it as a gourmet food or an agricultural commodity. Those different perspectives are triggering vastly different reactions to wild rice genetic studies which are being carried out by the University of Minnesota.

Since 1993, University scientists have been working to map the wild rice genetic code. This work could provide a boon to traditional cross-breeding programs, helping the paddy-grown wild rice industry boost production through the development of new seed varieties.

It could also facilitate future genetic engineering of the plant, where a snippet of genetic material from a different species could be inserted into the plant in order to introduce some desired particular trait.

To many Ojibwe, this work raises a host of concerns, some cultural, some political, some biologic, and some economic. Culturally, there is great concern about the potential for genetic manipulation. Manoomin was and is a special gift from the Creator, and the Ojibwe are its protectors; perfect in its given form, it is not something that should be artificially manipulated or altered.

Politically, the patenting of specific seed varieties is viewed by some as “biopiracy,” where individuals or corporations claim ownership of slightly modified strains of what is essentially a wild plant.

Economically, there are concerns that additional enhancements to the paddy industry will further hurt the already struggling pickers and sellers of true, wild-grown manoomin—still an autumn mainstay for some tribal members.

The paddy industry says nothing they are doing interferes with the Ojibwe’s spiritual relationship with rice. But what if manoomin itself is altered?

Questions exist about the possibility of genetically altered rice plants—even those altered through traditional cross-breeding processes—contaminating native wild stands, raising concerns both cultural and biological.

Certain traits that might be highly desired in plants grown in artificial paddies may be deleterious to plants growing in natural stands. Paddy growers, for example, want rice that is “non-shattering,” holding its seed until it is harvested in a single pass from a combine.

Although this trait may occasionally pop-up in nature, seed on most wild rice matures gradually, and may be dropped over a period of weeks, a trait that is likely ecologically adaptive under natural growing conditions.

All of this might not be much of a concern, except for the fact that there is nothing to prevent paddy rice from being grown in close proximity to wild beds, raising the possibility that seed, and especially pollen, from genetically altered plants could enter and alter natural stands.

To date no one seems able to answer questions about the likelihood and consequences of that scenario unfolding.

And until someone can, many Ojibwe will continue their fight to protect manoomin.

Gathering dedicated to Walter, water and wild rice

Two events this summer will be honoring the late Red Cliff Ojibwe Walter Brettez, water and manoomin (wild rice). One will be held at the Lac Courte Oreilles (LCO) reservation on June 21 and the other at the Mole Lake/Sokaogon reservation on June 29-30.

The events follow in tradition of “Protect the Earth” gatherings begun by Walt in an effort to bring native and non-native people together around environmental issues on behalf of Mother Earth.

Water and manoomin are sacral to the existence of the Ojibwe people. Tribes, such as the Mole Lake/Sokaogon, are especially concerned about protecting these resources when proposals such as the Cbandon Mine or genetic alteration of wild rice present impending threats to the well being of these precious resources. The gatherings will celebrate wild rice and water and honor Walt’s work and leadership. They are intended to join people in an effort to keep the world healthy for generations yet to come.

The gatherings will be held outdoors. At LCO, the gathering will be held at noon on June 21 at the LCO Anishinabe Cultural Healing Center. It will begin with a pipe ceremony by Frank Dickenson and Wanda Baxter, spiritual leaders from Red Lake, Minnesota.

This will be followed by “Walking Walter’s Way,” a five mile walk. Five miles symbolizes the mere five miles of atmosphere that support our lives.

At Mole Lake, highlights of the weekend will include performances by Ojibwe folk singer Bobby “Bullet” St. Germaine and Skip Jones, plus the Mole Lake/Sokaogon Drum. Al Gieddics, author of Resource Rebels, will be the keynote speaker. A five-mile walk to the top of Spirit Hill will also take place.

Participants are asked to bring honor and respect and a good heart. There will be a wild rice feast on Saturday. Food to share would be appreciated.

Both events incorporate talking circles, opportunities to share memories of Walt and a “Gathering of the Waters” ceremony. Bring a small container of your own water for the ceremony because each person will speak briefly about their water and then pour it into a common container to symbolize how all waters of the world are one.

For more information: www.protecttheearth.com, or call (715) 634-5806 or (715) 766-2725

Genetic research into wild rice is causing a stir among some Ojibwe people and others concerned that natural growing manoomin may be put in jeopardy. Protesters at the University of Minnesota called upon researchers to rethink their designs for wild rice. (Photo by Charlie Otto Rasmussen.)

Winnona LaDuke, left, was among the Ojibwe speakers at a rally protesting wild rice genetic research May 20 at the University of Minnesota. LaDuke is leader in the White Earth Land Recovery Project and a former Green Party vice-presidential candidate. (Photo by Charlie Otto Rasmussen.)

Resource Rebels
Knock it off!
Help stop the spread of Eurasian watermilfoil

By Miles Falck, GLIFWC Wildlife Biologist

Odanah, Wis.—“Knock It Off!” is the key to controlling the spread of a nasty non-native plant, Eurasian watermilfoil. It’s up to individuals to take control and clean their boats before leaving landings.

Eurasian watermilfoil (Myriophyllum spicatum) is an aquatic herb native to Europe, Asia, and North Africa. The plant consists of a long underwater stem that branches out near the surface to form dense canopies of floating vegetation. It can be distinguished from the native Northern watermilfoil (M. sibiricum) by the shape of its leaves and the number of leaflets.

Eurasian watermilfoil has feather-shaped leaves with 12-21 leaflet pairs, and falls limp when removed from the water. Northern watermilfoil has triangular-shaped leaves with five to 10 leaflet pairs, and remains rigid when removed from the water. Eurasian watermilfoil degrades fish and wildlife habitat, creates a nuisance for boaters, and alters water chemistry and quality.

The dense floating bed shade out native aquatic plants, limit feeding and cover choices for fish and waterfowl. Significant fish kills can result from oxygen depletion caused by the decaying biomass of watermilfoil over winter. Watermilfoil can also increase the frequency and severity of algal blooms and reduce water clarity by accumulating phosphorous from the sediment and releasing it in the water column. Finally, the dense mats of Eurasian watermilfoil create a nuisance for boaters by impeding access and clogging props and water intakes.

Although a prolific seed producer, Eurasian watermilfoil spreads primarily by vegetative means. Small stem fragments are capable of developing into new plants. Numerous stem fragments are released annually through a natural fragmentation process, and additional fragments are created by wave action and boat props.

The first record of Eurasian watermilfoil in North America was documented in 1942 in the District of Columbia. It has since spread to 45 U.S. states and three Canadian provinces.

While ship ballast and the aquarium trade have been important dispersal routes historically, transportation on boats and boating equipment (including trailers, motors, bilges, and live wells) currently accounts for the vast majority of new introductions to uninfested waters. Eurasian watermilfoil is currently found in 476 lakes and streams in Minnesota and Wisconsin, and is also widespread in Michigan.

While the use of mechanical harvesters and herbicides can provide short term relief to infested waterways, the economic and ecological costs can be quite high. Several biocontrol agents have also been considered for possible use against Eurasian watermilfoil.

Natural declines in Eurasian watermilfoil abundance at some sites have been attributed to Euchrychiopsis lecontei, a native freshwater weevil. However, results have varied widely and research using this biocontrol agent are still in progress. The most effective control is to prevent future introductions by cleaning your equipment prior to leaving a lake or river.

The 1837 Treaty Conservation Code (see sidebar) for the Minnesota Ceded Territory identifies specific actions that must be taken to prevent the spread of Eurasian watermilfoil and other exotic species.

The Voigt Intertribal Task Force recently recommended that member tribes adopt similar regulations for waters in the Wisconsin portion of the 1837 and 1842 ceded territories. Minnesota state law also prohibits the transportation of aquatic vegetation on public roads. Wisconsin recently passed an emergency order that prohibits launching a boat with aquatic plants or zebra mussels attached and is developing more comprehensive laws to control the spread of aquatic nuisance species.

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While several of these regulations apply to waters officially designated as “infested,” distribution data is incomplete. Good stewardship dictates that the following guidelines be followed regardless of a waterbody’s official designation.

**Distribution of Eurasian watermilfoil, 2002 (data from Minnesota DNR and Wisconsin DNR).**

**Excerpted from 1837 Treaty Conservation Code for the Minnesota Ceded Territory**

(a.) For the purposes of this ordinance, the term “infested waters” means waters and waterbodies identified by the Commissioner as having populations of select harmful exotic species such as zebra mussel (all species of the genus Dreissena), Eurasian milfoil (Myriophyllum spicatum), ruffle (Gymnocephalus cernuus), spiny water flea, or white perch (Morone americana).

(b.) No member shall take any wild animal from infested waters for bait purposes.

(c.) No member shall fail to:

(i) dry for a minimum of 10 days or freeze for a minimum of 2 days before use in noninfested waters any net or associated piece of equipment, including any trap, buoy, anchor, stake or line;

(ii) remove all aquatic vegetation from nets or associated equipment when they are removed from infested waters; or

(iii) notify the Commissioner or a Band or Commission warden when removing nets from infested waters and before re-setting those nets in noninfested waters.

(d.) No member shall use water from infested waters to transport fish without a permit from the Commissioner.

(e.) No member leaving infested waters identified as having populations of zebra mussels or spiny water flea shall fail to drain bait containers, other boating related equipment holding water, and live wells and bilges by removing the drain plug before transporting the watercraft and associated equipment on public roads.

(f.) No member shall transport infested waters on a public road or off property riparian to infested waters except as otherwise authorized by Minnesota state law or under special permit issued by the Commissioner, and no member shall divert infested waters except in compliance with Minnesota state law or in accordance with a special permit issued by the Commissioner.
Getting the bugs out of spring

Tent caterpillars and gypsy moths on the move

By Sue Erickson, Staff Writer

There is a possible upside to our frigid spring. If the May frost stunned your tulips, it could also have taken a toll on those tent caterpillars that invaded our forests and yards last year. Cold, wet springs can help to crash forest tent caterpillar numbers. If the young larvae hatch from egg masses in mid-May, so are vulnerable to the unseasonably cold conditions.

Last spring, much of the ceded territories experienced wide-spread tree defoliation as hordes of forest tent caterpillars munched on the tender leaves freshly budded on our forest trees, leaving a stark scene of denuded branches. Misguided caterpillars hung from our homes or turned our walkways and roads bug-crunchy.

Outbreaks of forest tent caterpillars normally last two to five years in the northern Midwest, so we can stand ready to see masses of fuzzy, black and blue creatures clamoring up aspen, birch, balsam, parsley, hickory, oaks, ash, alder, fruit trees and other broadleaf plants. An outbreak occurs normally about every six to 16 years. Forest tent caterpillars can be recognized by the distinctive line of white, keyhole-shaped markings on their backs, set off by the black and blue colors on either side.

Besides being an unsightly nuisance around homes or in the forest, the defoliation of the trees can cause damage. Although most trees can survive a season or two of defoliation, their growth can be stunted.

The term “tent” caterpillar refers to the tent or mat made by the larvae on a tree trunk or branch. The forest tent caterpillar actually uses a mat. The related eastern tent caterpillar uses a tent. After eating foliage, the larvae return to the mat/tent to rest, usually in the evening. Destroying the tents is one method of controlling tent caterpillars, especially when the larvae are small and in the tent, which is usually the evening or early morning. The tents may be brushed off or limbs with tents pruned off.

Also unsightly and difficult to remove are the cocoons attached to trees, shrubs or buildings. Near the end of June the caterpillars abandon their quest for food and find a place to spin a cocoon. The forest tent caterpillar will emerge from the cocoon mid-July as a tan-colored, adult moth with two dark brown stripes on the front wings.

The moth is nocturnal and attracted by light, so turning off lights around your home at night will help keep them away. The moth will deposit approximately 100 eggs each day. When the eggs are hatched, the larvae will feed on the leaves. The eastern tent caterpillar is likely to be found munching on ornamental trees often in urban areas. It prefers wild cherry, apple and crabapple trees, but will also feed on ash, birch, blackgum, redbud, willow, witch-hazel, maple, oak, poplar, cherry, peach, and plum.

Coming to the ceded territories—the gypsy moth

A 19th Century French naturalist seeking to develop a stronger silkworm through interbreeding first introduced the gypsy moth, a non-native species, into the United States. Some of the exotic moths escaped in 1869 in his hometown of Medford, Massachusetts. By 1889 the population exploded, and they have been heading south and westward ever since.

Wisconsin is now on the leading edge of the gypsy moth’s westward expansion. In fact, this spring the Wisconsin Department of Natural Resources used aerial spraying in twenty-two Wisconsin counties in order to reduce gypsy moth populations. They treated with pheromone flakes and with Bacillus thuringiensis (Bt).

Every five to fifteen years gypsy moths tend to have a population outbreak, similar to the forest tent caterpillar. Following a May hatch, the caterpillars feed into July. The gypsy moth caterpillars feed on oaks, crabapple, linden, willow, birch, aspen, and over 250 other species of trees. Trees can be stripped of foliage in a week.

Gypsy moths generally spread by hitchhiking on outdoor articles that get moved to uninfested areas. That is why people should check outdoor equipment for eggs before traveling to a new area with it. In some instances, eggs are carried by high winds. A barrier zone was set up along the Hudson River in the early 1900s, but a hurricane blew the moths across the river into western New York.

Currently, the federal government works in conjunction with state agencies to curb the spread of gypsy moths. Several insecticides have been used against gypsy moths, including carbaryl (Sevin), acephate (Orthene) and diflubenzuron (Dimilin). The newest treatment is Bacillus thuringiensis (B.t), a naturally occurring substance consisting of biological spore, spore fragments and toxin specific to caterpillars. It is sold under the trade names Thuricide, I and Dipel.

Treatment with insecticides are combined with eradication measures such as quarantines and inspections, the release of parasites and predators, traps with a sex attractant, sterile-male release, and the use of pheromone flakes. Pheromones are chemicals produced by a species to communicate with individuals of the same species, often used to attract a mate, mark territory, or warn of danger. When released at a time that males are seeking mates, the males become confused and cannot find a mate.

Editor’s note: Information for this article was taken from the websites of the Wisconsin Department of Natural Resources, University of Minnesota Extension, University of Kentucky Extension, University of Michigan Extension, the US Department of Agriculture and from a gypsy moth fact sheet published by the Animal and Plant Health Inspection Service (APHIS).

There are tent worms, gypsy moths, and forest tent caterpillars. All different. All can be killed (and their larvae) using a hose and sprayer filled with about 1/2 Dawn liquid detergent. This works on all caterpillars and will not hurt the plants. Skip the chemicals and use the soap. Cheaper and harmless except to the worms.”

—gardenweb.com

Data retrieved from National Agricultural Pest Information System

The Center for Environmental and Regulatory Information Systems (CERIS) does not certify to the accuracy or completeness of this map. (Reprinted from http://www.ceris.purdue.edu/napsi/posts/gmp/imag0012gmp2001.html)
Upstream travel restricted on St. Croix River to help control zebra mussel spread

St. Croix Falls, Wis.—Boats on the St. Croix River can no longer travel upstream past a checkpoint at river mile 28.5, approximately 3 1/2 miles upstream of Stillwater, Minnesota.

National Park Service rangers stop boats at this point from a boat ramp named the Big Dipper and explain the program to stop the spread of the zebra mussel.

“The Big Dipper marks the point in the river that we can’t allow zebra mussels to cross,” stated Tom Bradley, Superintendent of the St. Croix National Scenic Riverway.

“Boat traffic has enabled zebra mussels to spread from the Mississippi River up the St. Croix. All the way to St. Paul,” Bradley continued. “Boats are allowed to carry the mussels farther upstream, the entire native mussel population in the river could be lost,” Bradley said.

The St. Croix River has one of the richest populations of mussels in the country. Forty species live in the river, including two on the Federal Endangered Species List: Higgin’s eye and winged mapleleaf. Ocean-going vessels transported zebra mussels to the Great Lakes region in 1988 from Europe, from where they spread into the Mississippi River system.

The zebra mussel reproduces quickly and attaches to anything hard, including native mussels. If enough zebra mussels attach to a native mussel, it can’t feed or breathe, and it dies.

“Byron Karns, Rainwater biologists and other experts are not sure why zebra mussel numbers were lower in 2001. Prolonged flooding in the spring and high water temperatures in the summer may have been important factors, but attention to the problem by river users certainly helped prevent zebra mussel spread. Not all of the news on the zebra mussel last year was good. The population on the stretch of the St. Croix from Stillwater, and substantially fewer numbers of zebra mussels than anticipated between Stillwater and Hudson,” said Byron Karns, St. Croix National Scenic Riverway Zebra Mussel Program Coordinator.

“From Hudson to Afton, young of the year and juvenile mussels were found; but not in explosive numbers and not until late in the season,” said Karns.

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South shore lamprey round-up
GLIFWC fishery crews monitor Lake Superior rivers

By Charlie Otto Rasmussen
Staff Writer

L'Anse, Mich.—Using some appear-
tations from live livestock ranchers
on open range land, Great Lakes Indian
Fish & Wildlife Commission (GLIFWC)
fishery technicians rigged nets in a handfull of ceded territory
rivers for the annual sea lamprey round-
up in May.

But this is like no cattle drive. It’s
part of a massive inter-agency effort
to curb and monitor sea lamprey numbers
as they swim up Lake Superior tributar-
ies to spawn in the spring.

On Upper Michigan’s Silver River
along the northeast edge the Keeweenaw
Bay Indian Community, staff and in-
terns from GLIFWC’s Great Lakes Sec-
tion centered a fyke, or hoop net, below
the gravel riverbottom with a post driver
across a stretch of gurgling rapids.

The crew drove steel fencing into
the gravel riverbottom with a post driver
and strung up two lengths of netting,
creating a V-shape with the fyke net in the
middle. Lamprey swimming upstream
were guided into a series of mesh hoops and trapped.

“Lamprey seem to be showing up
up a little later this year, possibly due to
cold water temperatures,” said GLIFWC
technician Mark Pero in late May.

“But we’re already seeing an increase in lamprey spawning on the Firesteel
River over last year,” Pero, an Environmental Engineer-
ning student at Michigan Technological
University, makes regular trips to the
Silver, Firesteel, and Misery Rivers with
GLIFWC fishery aids to collect data
from captured sea lamprey.

Population estimates are
figured by mark and recapture analyses—a pro-
cess of “marking” lamprey by clipping
the dorsal fin, returning them to the
driver downstream, and recording how
many clipped lamprey show up in the
trap again.

Since 1986 GLIFWC has been a
partner in the Sea Lamprey Control
Program—a division of the Great Lakes
Fishery Commission (GLFC) managed
locally by the U.S. Fish & Wildlife
Service (USFWS).

Among Wisconsin rivers that feed
Lake Superior, GLIFWC lamprey con-
trol crews monitor the Bad, Middle and
Amnicon Rivers. Federal and state natu-
ral resource agencies supervise seven
additional rivers across the South Shore
where spawning lamprey are known to
exist.

GLIFWC lends a hand
with sturgeon tagging

By Sue Erickson, Staff Writer

Odanah, Wis.—Tagging sturgeon in the Bad River comes under “other
duties as assigned” for the Great Lakes Indian Fish & Wildlife Commis-
sion (GLIFWC) lamprey control crew this spring. They’ve agreed to help out the Bad
River Tribe and the U.S. Fish and Wildlife Service (USFWS) by watching for
spawning sturgeon when checking lamprey traps in the Bad and White Rivers.

The USFWS and the Bad River Tribe are cooperating in a sturgeon tagging
project and sturgeon population assessment in the Bad River.

To date, GLIFWC’s crew captured three adult sturgeon in the Bad River, two
females and one male. Once captured, each fish is measured, weighed and tagged
with a floy tag and a passive internal transmitter (PIT) tag. The floy tag is an
external tag, easy to see. The PIT tag is actually injected into the muscle tissue at
the base of fish’s skull, so it is an internal tag. The benefit of the PIT tag is that it
does not get lost.

Of the three captured sturgeon, one was a “recapture.” It was first captured and
tagged by the USFWS on May 7, 1995 in the lower Bad River. At that time, the
sturgeon had spent her eggs and weighed 41.5 pounds. In 2002, the sturgeon had
not spent her eggs yet, and she weighed 60 pounds. The weight gain has to factor
in that she had not spent her eggs. The fish had grown three inches in seven years,
less than one-half inch per year.

GLIFWC works with the US-
FWS and the Bad River Tribe to num-
mer perform juvenile sturgeon
assessment.

Fishery manag-
ers are in the process of building a data base
on lake sturgeon, a fish that has
totally disappeared from many Lake Superior
tributaries.

Depending on location in Lake Su-
perior, lake sturgeon populations appear to
be stable or increasing, according to Bill
McPherson, a fisheries technician from
GLIFWC Great Lakes Section leader.

Mike Pluecinski, Great Lakes Fisheries technician, tags a sturgeon captured in the Bad River, while Nate Bigboy, ANA field assistant, holds the writhing fish. (Photo by Carrie Cannon.)

While lamprey in the Silver and
Firesteel Rivers are ensnared in fyke
nets, Pero uses steel box traps to survey
the Misery River.

Box traps are situated adjacent to
barriers like small waterfalls or the rem-
nants of old dams where lamprey are
forced to enter a restricted passage to
get upstream. The lamprey spawning run generally occurs from late
April through July.

Native to the Atlantic Ocean, sea
lampreys worked their way into the
Great Lakes along water routes created
to accommodate large ships. Lampreys
were found in all five Great Lakes by
1940. During their peak in the 1960s,
lamprey ravaged native fish species like
lake trout. Since that time, control ef-
forts including construction of barrier
dams that stop lamprey but allow fish
to pass through and river treatments with
the lethal chemical agent TFM, have
checked lamprey numbers.

Despite efforts to eradicate the
eel-like lamprey, sea lamprey still consume large amounts of prey. Some estimates
indicate that lamprey kill as many fish
are harvested by humans through sport
and commercial fishing, GLFC and
USFWS are exploring new control
methods, including the use of phero-
mones and low frequency sound
waves.

Fish is essential for healthy heart

By Mattes, GLIFWC

Mark Pero, GLIFWC fishery technician, (left) and Nate Bigboy, ANA field assistant, rig-up a guide net in Upper Michigan’s Silver River. The net acts like a fence and steers sea lamprey migrating from Lake Superior into a fyke net where they are trapped. (Photo by Charlie Otto Rasmussen)

Note: The following is a transcript of a report that aired on NBC’s Nightly News with Tom Brokaw.

Many of the lunchtime customers
at Legal Seafoods in Boston have al-
ready heard of the health benefits of
fish.

“We love fish, and my husband
had a heart attack and a bypass, and I
have been told I have high cholesterol,”
said Joan Romanish.

The research out today leaves no
doubt. A 16-year study of almost 85,000
women found that those who ate fish
two to four times weekly cut their risk of
heart disease by 30 percent, com-
pared with women who rarely ate fish.

Women who ate fish five or more
times weekly reduced their risk 34 per-
cent. Past studies showed similar ben-
efits for men, but this was the first to
look specifically at the effect in women,
according to the new research published
in the Journal of the American Medical
Association.

Plus, a 17-year study of men with
no history of heart disease published in
The New England Journal of Medi-
cine found that those with the highest
blood levels of omega-3 fatty acid, the
healthy fat found in fish, were more
than 80 percent less likely to die sud-
denly from heart disease.

“It’s a low-risk, very inexpensive
way to lower the risk of heart disease,”
said Dr. JoAnn Manson of Boston’s
 Brigham and Women’s Hospital, co-
author of the men’s study.

The key to the heart benefits of
fish is omega-3 fatty acid. Some kinds
of fat are bad for you, but the fat in fish
actually lowers cholesterol, helps pre-
vent blood clots that form in heart at-
tacks, and lessens the chances for the
irregular heart beats that cause about
250,000 sudden deaths a year.

The best sources of the healthy
fatty acid are ocean fish such as salmon,
tuna, mackerel and arctic char. But even
if you can’t afford these tasty, some-
times-expensive fish, canned tuna or
sardines work just as well.

Eating fish twice a week can give
almost all the benefits that there is to
eating fish in general, said Dr. Walter
Willett of the Harvard School of Public
Health.

The best advice, experts say, is
to eat fish, because the more science stud-
ies it, the more it seems to be a miracle
food.” (Reprinted from Worldcatch News
Network.)
GLIFWC developing lake trout model to compute lake trout quotas

By Sue Erickson, Staff Writer

Odanah, Wis.—The goal of a one-year project funded by the Administration for Native Americans (ANA) is to develop a computer model capable of producing a total allowable catch (TAC) figure for lake trout in MI-2, a management unit in the Michigan waters of Lake Superior. MI-2 is one of several units fished by treaty, commercial fishermen.

A model is essentially a combination of formulas that can receive data and compute a result. In this case the lake trout model would receive information such as numbers and ages of lake trout captured in assessment nets, number and ages of lake trout harvested, and estimated numbers of sea lamprey in any given year.

The model would “crunch” the inputted numbers and provide a TAC or quota to be used in the treaty, commercial fishery, according to Great Lakes Indian Fish & Wildlife Commission’s (GLIFWC) Great Lakes Section Leader Bill Mattes.

As part of the program, Mattes took a computer-programming course at Northland College, Ashland, and hired Nathan (Nate) Bigboy for a nine-month position as a field technician. Bigboy is involved in assessment work and collecting the necessary data on lake trout and sea lamprey.

The need for a new model became apparent in 1996 when stocking of lake trout was discontinued. Spreadsheet models had been developed, but they relied heavily on lake trout stocking figures. A spreadsheet model for the treaty fishery was developed in the mid 1980’s by the Wisconsin State/Tribal Technical Working group for Wisconsin waters of Lake Superior. A few years later, this model was adapted by GLIFWC’s Lake Committee biologists for the 1842 Treaty area in Michigan waters of Lake Superior.

Then in the mid-1990’s, Jim Bence, Michigan State University professor, modified and improved this spreadsheet model for portions of the Michigan and Wisconsin waters of Lake Superior under an ANA grant to the Red Cliff Band.

Besides being skewed by the discontinuation of stocking, the older spreadsheet models were cumbersome. “It became clear we had to use a different approach to crunch the numbers,” Mattes says.

The Lake Superior Technical Committee discussed and decided upon an approach which relies on developing programs using AD Model Builder software. Programs that model lake trout populations have been developed for eastern Lakes Superior and northern Lake Huron.

Shawn Sitar, Michigan Department of Natural Resources fishery research biologist, initially developed the model for Lake Huron as part of his graduate studies. While this model can be used as a starting point, it will need to be tailored to the MI-2 fishery, Mattes says. That is the objective of the ANA project.

The project will be completed by April 2003. Mattes hopes to obtain another ANA grant to develop a lake trout model for MI-3 and update those developed for MI-4 and MI-5, all management units in the Michigan waters of Lake Superior.
Christina Dzonkowski joins GLIFWC’s Enforcement Division

Odanah, Wis.—New to GLIFWC’s Enforcement Division is Christina Dzonkowski, who joined the enforcement staff on May 20. She will be stationed at the Lac du Flambeau enforcement satellite office.

Christina is a member of the Bad River Band; however, she grew up in California and in the Rockford, Illinois area, spending time during the summers on the reservation. She heard about possible opportunities with GLIFWC through Bad River family members who encouraged her to apply.

Pursuing an early interest in a law enforcement career, she enrolled in the Rock Valley College to pursue an Associate of Arts degree in criminal justice. She is a few credits shy of the degree, so will be completing the course while working with GLIFWC.

As part of the school’s program, she served two internships in law enforcement, putting in 225 hours with the Winnebago County Sheriff’s Department and 150 hours with the Loves Park Police Department, both in Illinois. She has also worked with the Belvidere Police Auxiliary in Illinois, assisting with routine police work in the company of a full-time officer.

Christina says her love of the outdoors and related activities, such as hunting, fishing and four-wheeling, contributed to her interest in the enforcement field, especially conservation enforcement.

After undergoing orientation at the GLIFWC main office in Odanah and completing firearms training, she will assume her position at Lac du Flambeau. However, she will be enrolled in basic recruit training at the Chippewa Valley Technical College, Eau Claire, this fall or winter.

Masinaigan becomes Mazina’igan

Means the same, but sounds different

Perhaps you noticed the spelling change in our masthead this edition. The Mazina’igan Editorial Committee decided to change the spelling to reflect the usage in A Concise Dictionary of Minnesota Ojibwe by John Nichols and Earl Nyholm. GLIFWC uses the Nichols and Nyholm dictionary as a standard reference for the organization in order to provide some consistency in use of the language.

The spelling also better reflects the pronunciation, particularly by emphasizing the “z” sound and the glottal stop which is characteristic of Ojibwe (Ojibwemowin) language. Mazina’igan means “book, paper, letter, document,” according to Nichols and Nyholm.

The Editorial Committee feels it is important to show respect for the language by trying to use it correctly.

Controlling the spread of Eurasian watermilfoil

(Continued from page 5)

What you can do
Prior to leaving a lake or a river:

• DISINFECT and REMOVE all aquatic vegetation.
• DRAIN water from all boating equipment (motors, live wells, bait containers).
• DISPOSE of unwanted bait on land.
• RINSE your boat and equipment with hot high pressure water, or
• DRY your boat and equipment for at least 5 days.

Information for this article was obtained from the following web sites:
Minnesota Seagrant: http://www.seagrant.umn.edu/exotics/eurasian.html
Invasive Exotic Plants of Canada: http://infoweb.magi.com/~ehaber/factfoil.html
For a list of infested waters:
Minnesota: http://files.dnr.state.mn.us/ecological_services/exotics/infested.pdf
Wisconsin: http://www.dnr.state.wi.us/water/wm/glwp/elexotics/milfoil.html

For Regional Distribution Maps:
http://www.glifwc-maps.org

Federal government goes to bat for Mole Lake/Sokaogon TAS

The federal government is weighing in on the side of the Mole Lake/Sokaogon Band in an appeal filed in the U.S. Supreme Court by the state of Wisconsin opposing the band’s “Treaty-As-State (TAS)” status within the Environmental Protection Agency.

The TAS status would potentially allow the Band to impose strict water quality standards to protect the reservations’ waters. Those standards could possibly impede the plans for a copper-zinc mine about one mile from the reservation’s border.

U.S. Solicitor General Ted Olson filed a brief in May defending the right of the Band to exercise authority over its reservation. The State of Wisconsin contends that the TAS status dramatically expands the tribe’s inherent and limited rights.

St. Croix considers power plant

The St. Croix Band of Chippewa is considering the development of a small-scaled, natural gas-fired power plant in northwestern Wisconsin.

The plant would serve as an alternative source of revenue for the tribe with the power being sold into the wholesale market.

A feasibility study, managed by E-Vironment, a Texas-based business and environmental consulting firm, has been commissioned by the tribe to recommend where and how the plant would be built.

Upon completion of the study, the tribe would sell the project to a utility company or other investors who would actually build the facility under a negotiated agreement with the tribe.

New supervisors assume their posts at the Chequamegon-Nicolet and Ottawa National Forests and the Eastern Region

Recently appointed as the Eastern Regional Forester is Randy Moore. The Eastern Region includes 15 national forests in 20 states. He is leaving his position as forest supervisor for the Mark Twain National Forest (NF), Missouri.

Robert Lueckel, former Acting Forest Supervisor for the Chequamegon-Nicolet NF, is the new Forest Supervisor to the Ottawa NF. Lueckel has a forestry and business management background. Besides experience with the Chequamegon-Nicolet NF, he has worked in the Green NF, Vermont and the Mountain NF, New Hampshire as well as in the Washington D.C. Forest Service office.

Anne Archie assumed the post of Forest Supervisor to the Chequamegon-Nicolet NF on May 20. She was formerly the Deputy Forest Supervisor on the Boise NF, Idaho. Her career with the Forest Service began in 1977 on the Malheur NF, Oregon as a wildlife biologist. She has also worked on the Tongass NF, Alaska and the White Mountain NF, New Hampshire as a district ranger.

Mole Lake/Sokaogon receive grants to study zebra mussels

The Wisconsin Department of Natural Resources recently announced recipients of grants intended to help communities study ways to improve their lakes. The Mole Lake/Sokaogon Band’s proposal to study the impact of zebra mussel on Lake Metonga, Forest County, was among those selected.

The St. Croix Band of Chippewa is considering the development of a small-scaled, natural gas-fired power plant in northwestern Wisconsin. The multi-year study is now in its initial stages, according to Mole Lake Fishery Biologist Mike Prieil.

Clean boats and bait buckets—stop the invaders!

26 new lakes invaded by exotic species

According to a release from the Wisconsin Department of Natural Resource (WDNR), 2001 saw zebra mussels and Eurasian watermilfoil invade 26 new Wisconsin lakes. In order to stop the dramatic increase, boaters and anglers must take the time and precaution to clean their boats and gear.

The WDNR plans to have boat inspectors at some popular boat launches to study zebra mussels. Information for this article was obtained from the following web sites:

Minnesota Seagrant: http://www.seagrant.umn.edu/exotics/eurasian.html
WI DNR: http://www.dnr.state.wi.us/lnd/er/invasive/factsheets/milfoil.htm
Invasive Exotic Plants of Canada: http://infoweb.magi.com/~ehaber/factfoil.html
For a list of infested waters:
Minnesota: http://files.dnr.state.mn.us/ecological_services/exotics/infested.pdf
Wisconsin: http://www.dnr.state.wi.us/water/wm/glwp/elexotics/milfoil.html

For Regional Distribution Maps:
http://www.glifwc-maps.org

Christina Dzonkowski.
Wisconsin spring treaty harvest yields plenty of walleye—up from 2001

(Continued from page 1)

Oreilles, Lac du Flambeau, Mole Lake/Sokoagon, Red Cliff, and St. Croix Bands from Wisconsin.

In addition to Mille Lacs Lake, 866 pounds of walleye were harvested from Green Lake, Chicago County.

All open landings were monitored as nets were set and lifted. Both spear- ing and netting landings are monitored by conservation officers and creel clerks.

GLIFWC conservation officers stationed at off-reservation landings on Mille Lacs Lake, Jim Mattson and Zebulon Retka, were assisted by offic- ers from Wisconsin, including Vern Stone, Bad River; Mark Breseette, Red Cliff, and Mike Soulier, Red Cliff.

At on reservation landings, Mille Lacs Band conservation officers, Ralph LaPlant, Loyd Ligneel and Mike Taylor worked with GLIFWC creel clerks to monitor the harvest.

With nets set at night and lifted in the morning, many hours are required of the harvest monitoring teams, which include both creel crews and wardens, throughout the season.

Wisconsin spring treaty harvest

The St. Croix Band opened the 2001 Wisconsin spring spearing season on April 17, harvesting 231 walleye from five lakes. In Wisconsin, the tribes harvested a combined total of 25,543 walleye from ceded territory lakes this spring. The total walleye harvest was 52% of the declared quota of 48,321.

In 2001, the tribes harvested a combined total of 22,999 walleye, equaling 51% of their combined declaration.

To date, the tribes took the most wall- eye during the 2000 spring season when they harvested 30,367 walleye, equaling 74% of their total declaration.

The tribes harvested a combined total of 218 muskellunge from Wisconsin’s ceded territory lakes this spring, a few less than the 2001 muskellunge harvest of 233. The spring seasons in both Wisconsin and Minnesota went well with no reports of protesters, ac- cording to GLIFWC’s Chief of En- forcement Jerry White. “Besides the fact that Ma Nature tried to whoop us, the season went smoothly,” he said.

(Continued from page 1)

Bob Chelberg, Red Cliff, brings in a walleye from Lake Namekagon during the 2002 spring spearing season. Windy weather made for tricky conditions and kept him and his partner, Don Garnoe, to the leeward shorelines of the lake.

GLIFWC officer Ken Pardun prepares a midnight snack at a Shell Lake boat landing.

Zeb Retka, GLIFWC warden at Mille Lacs, put in his first spring season as a warden at Mille Lacs Lake this year, encountering long hours and rough weather.

St. Croix’s Tristan Oustigoff plucks a walleye from Shell Lake, Wisconsin on April 26. Record high water levels brought spearers to the edge of flooded timber to find fish on the 2,500 acre lake.

Photos by Sue Erickon & Charlie Otto Rasmussen

Perry Staples, St. Croix, pulls up a net on Mille Lacs Lake.

Taking data on a morning’s catch, Pete Halfaday, GLIFWC creel clerk at Mille Lacs Lake, mans the measuring board and scale.
Out for fun and fish
LdF seniors net Mille Lacs

Mille Lacs, Minn.—A chill breeze blew off Mille Lacs Lake nipping the fingers of Lac du Flambeau (LdF) elders as they worked to clean and package fish from the morning’s lift. With a production line set-up at the Mille Lacs pow-wow grounds, the ‘Shinaabes each concentrated on his or her particular task to process the catch. A few jokes and jibes flew as fillet knives separated bone and meat. Then the next fish was flapped on the picnic table from the buckets brought from the landing. In another area, women washed and packaged the fillets. An overcast sky offered no glimmer of warmth, but no one in the bustling group seemed phased by the weather.

“I love to fish, and it’s important that we exercise our treaty rights,” said Virginia Chosa, as she slipped fillets of walleye into small plastic bags and deftly sealed the zip lock.

That is why Virginia, along with over thirty other LdF elders, arrived at the Grand Casino Mille Lacs Hotel on April 29 for four days of netting on Mille Lacs Lake. The LdF Senior and Disabilities Program coordinated the expedition. For some, this was the first-time-ever netting experience; for others it was the first time netting Mille Lacs Lake. Yet others are veterans of the three previous seasons when LdF seniors ventured to Mille Lacs Lake to exercise their treaty rights.

Once fillets were neatly packaged, tables were rinsed and the grounds picked up. Thankful that the Mille Lacs Band provided them with a place to process their fish and a freezer for storage, the elders were careful to show respect to the grounds and leave them clean.

Leonard Sam, Mille Lacs Band member, arrived at the pow-wow grounds to check on the group and show them where to dispose of the fish remains. Then, gear, fish and Shinaabes with folding chairs in hand, all loaded into several vans to return to the hotel until evening, when the nets would once again be set.

Actually, four or five of the guys got the daily permits, set the nets at night and lifted the nets in the morning, says Goldie Larson, LdF Senior and Disabilities Program coordinator. Around nine a.m., another crew arrived at the landing to pick fish from the nets before they were taken to the pow-wow grounds for processing.

Larson organized the first spring netting expedition to Mille Lacs four years ago, because “we struggled hard for our off-reservation treaty rights, and it’s important to get our elders involved and include them. Some of our elders are still leery of exercising their off-reservation rights, while others were out on the landings in the 80s during the hostile nights in Wisconsin.”

For LdF elder Betty Jack, the communal effort is reminiscent of her childhood, when family groups camped during specific seasons for ricing, berry picking or fishing. “It was a communal lifestyle,” she says. “During ricing, the families camped at the lakeside. We would dance and thrash the rice and roast the rice during the day; drum and tell stories at night. The rice would be divided up to families in the end.”

“I’ve been doing this since I was knee-high,” she says. “There was no electricity, no transportation. You could be working side by side with some you didn’t like, but you put differences aside and fought later.”

A bundle of energy and enthusiasm, Betty joined the LdF seniors when they arrived on Monday after netting with her daughter, Yolanda St. Germaine, over the weekend.

Larson prepared five new nets purchased by the Lac du Flambeau Band, elders stretch them out across the landing to make sure they are tangle-free. From the left, Robert Schuman, senior helper, Goldie Larson, LdF Senior program coordinator, Roland Larson, Billy Martin, and Joe Valliere.

Betty Jack sends off another crew ready to set nets in Mille Lacs Lake. Ed Chosa and grandson, Ed, are forward. Skipper (Loyd) Schuman is midship. Not seen, at the helm is Randy Schuman.
Seniors’ interest in spring netting has grown, says Larson. The netting excursion drew twelve participants the first year. This year forty signed up and about 36 actually came on the trip, some arriving independently with their own gear. The LdF Band provided five nets to the seniors. Both the work and the fish are shared among the group. This year each senior brought home three meals each. Conditions on the lake were tough this spring, and netting was a struggle with windy conditions limiting where nets could be set, says Larson. This was the first year to net Mille Lacs Lake for Joe Durant, LdF senior, who has speared fish since he was twelve and netted whitefish in Wisconsin as a child. Durant had to rearrange his work schedule in order to come, but he definitely enjoyed the netting and plans to return in 2003.

For Ed Chosa, LdF elder, it was truly a celebration to be out fishing after having missed several seasons due to a heart condition. He and his grandson, Ed, set and lifted nets. Towards noon, the air carried the delicious smell of fish soup rising from Chosa’s campfire cookpot. He was waiting for his wife, Margaret, to return with fry bread dough for a small cookout. They were thoroughly enjoying the Mille Lacs experience. “It’s quiet here,” Chosa commented, checking his simmering pot. “Maybe we oughta have Bud Grant over for a fish fry,” he quipped.

Larson and Pat Graveen, however, won a prize for the perch they caught through the ice. The group would like to go fishing in Canada, has shown interest in some turkey hunting, and plans to go gathering blueberries and strawberries again this summer.

Also along for the action were Roberta and Randy Schuman, LdF senior helpers, and LdF volunteer, Skipper (Loyd) Schuman. Larson and the elders greatly appreciate the assistance and hospitality provided at the landings, especially by Leonard Sam, Mille Lacs Band member, who has gone out of his way to accommodate the visiting elders. Larson also extends a chi miigwech to GLIFWC warden Zebulon Retka who assisted elders as well as to other tribal members, such as Wayne LaBine, Mole Lake, who shared his time and boat.
Have a very berry summer!
Find something good in the woods this summer.

Raspberries—miskominag
Red berries ripen in July and August.
Watch out, they have thorns!

Wild blackberry—odatagaagominag
Blackish berries ripen from July through September.
They have thorns. Wear long sleeves!

Blueberries—miinan
Blueberries ripen in July and August.

Wild strawberries—ode’iminan
Bright red berries ripen in July.

When walking in the woods, watch out for poison ivy/animikiibag. It looks like this (below) and if you touch it, it will make you itch.

Different types of plant leaves to watch for:
- entire
- toothed

Different types of leaf arrangements to watch for:
- opposite
- alternate
- whorled

(Photographed by Robert R. Kowal, courtesy of Wisconsin State Herbarium: UW-Madison.)

(Photographed by Kenneth J. Sytsma, courtesy of Wisconsin State Herbarium: UW-Madison.)
**Niibin—It Is Summer**


(When it is summer, I go to the traditional dance (powwow). Also, my mother and my father they go there. I see them my uncles and my aunts. I visit with them those friends (girls). I dance. I eat them/her frybread. Plenty, I laugh. I pray. I like to hear him, that drum. Come in! Come there.)

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**Dependent Nouns**

My, Your, His/Her Family

| Niimaagi(yag) | My mother. |
| Gishtigwaan | Your head. |
| Gishtigwaan | Your head. |
| Oshtigwaan | His/her head. |
| Ninik(an) | My arm(s). |
| Ginik(an) | Your arm(s). |
| Onik(an) | His/her arm(s). |
| Gimiwin | My brother or sister(s). |
| Gishtigwaan | Your brother. |
| Gishtigwaan | Your brother. |
| Oshtigwaan | His/her brother. |

These nouns always speak for who the family member belongs to. Also works with body parts!

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

| A. Noongom nimiwag awjiing. Noodin gaye. |
| B. Gii-izhaayaan zaaga’amowigamigong, gii-kisinaa. |
| C. Ningabesh zaaga’ginganig. Mino-gabeshiwin. |
| D. Giziibiigiisaginige-giizhigak, Anishinaabeg izhaawag imaa niimi’idiwining. |
| F. Abinoojiyag odaaminowag. |
| G. Ininwag makizinateagaw. dikii. |

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**Translations:**

_Niizh—2_ A. Today it is raining outside. It is windy also. B. When I went to the outhouse, it was cold. C. I am camping by the lake. A good campsite. D. When it is Saturday (floor washing day), Indian people they go there to the dance. E. Also they camp under birch trees. F. Children they are playing. G. Men they play the moccasin game when it is night.


_Niizh—4_ A. My younger brother or sister(s). B. Your younger brother or sister(s). C. My head. D. Their head. E. My arm(s). F. Your arm(s). G. His/her arm(s).

Goojitoon! Try it! Translation below.

1. ___________ obizikaan ziihakisa ‘gaganogooday.
2. Niwii-gizhigewin waa nimpicoon.
3. Ninise apane ___________.
4. Mandy ina a’aw ikwe awedii ___________.
5. _______ dede ogizhnaanga ingiw abinoojiyin.
Harvesting bagaanag (hazelnuts) for winter storage

Red Cliff, Wis.—Joe Duffy, a Red Cliff tribal elder, remembers gathering bagaanag (hazelnuts) in gunny sacks during late summer and early autumn. The gathered bagaanag would be spread out over a tarp on a flat roof and left to dry for four or five days. During drying, the outer husks would loosen and turn brown, allowing for easy removal.

His mother would fill many storage jars with bagaanag. One season’s worth of gathering would last through the winter. She liked to use them in cookies, cakes, breads, and other baked items.

Of course, they taste delicious all by themselves. Joe has never tasted a more flavorful nut—surprising given its small size.

He doesn’t remember eating any other kinds of nuts as a youngster. His family, nor any others he knew, shopped at food stores. They would buy flour and sugar in bulk, but certainly not nuts.

His family never had much money, but always had plenty to eat. Most of their food came from the land—venison, fish, berries, dandelion greens, bagaanag, etc. They had a vegetable garden and a cow from which they got fresh milk.

Nowadays, everyone just drives down to the local grocery store. Joe would like to see the tribal youth do more hunting, fishing, and gathering. He thinks television and videos have created too much of a distraction.

Two of his children, with their children, still gather bagaanag. He hopes that his great-grandchildren will continue the tradition as soon as they get old enough. Unfortunately, bagaanag do not grow as plentiful as before. Joe can still find bagaanwaniminzhiig (hazelnut plants) but he rarely sees them with bagaanag. Instead of utilizing gunny sacks to gather bagaanag, now he gathers most, just every once in a while.

He used to find bagaanag along logging roads, but those have all grown over. He thinks fire suppression probably has been a factor. When he was young, fires used to occur every five or six years. He says that other plants, like minkaawanawanzhiig (blueberry plants), also benefit from fire.

Other tribal elders have made observations similar to Joe’s. Isabelle Chosa, Keweenaw Bay; and Ruth Antone, Lac Vieux Desert, have always gathered bagaanag beside roads. They believe that roadside chemical spraying and mechanical brushing have caused the decline in bagaanag, Audrey Lyons, Bay Mills, blames road salt.

Isabelle, along with Marcella Beson, Lac du Flambeau; Geraldine Parish, Bay Mills; and Elmer J. LeBlanc, Bay Mills, see urban development and construction as a factor. Margaret Ojibway, Fond du Lac, and Virgil Loonsfoot, Keweenaw Bay, think excessive logging has also impacted bagaanawanzhiig.

Temperence De Be does believe that no one takes care of bagaanawanzhiig anymore. She knows of few tribal members that continue to gather bagaanag.

It seems understandable that with so few bagaanag to find, thus considerably increasing the labor of gathering, not many tribal members take time for this tradition. However, with knowledge from tribal elders, combined with western science, bagaanwaniminzhiig may again produce “gunny sacks” of bagaanag.

Joe hopes to see that some day. He hopes that his great-grandchildren and their great-grandchildren will be able to and want to gather bagaanag for winter storage.

Bagaanag recipes

American hazelnut

Hazelnuts mature in late summer or autumn. To prepare nuts for winter storage, use as a flour in pancake recipes. Toast hazelnuts, bake in a shallow pan until golden brown and the hulls start to break off. Rub hull to remove. Grind to nice fine meal.

No cook candy

Mix 1 egg white with 2 cups confectioner’s sugar. Add 2 tsp. butter or margarine and blend until smooth. Work in 2 cups chopped hazelnuts and form into balls. Eat and enjoy.

Hazelnut hot cakes

Finely grind 1/2 pound dried hazelnuts. Beat 2 cups water until mushy, about 30 minutes. Add 1 tsp. maple syrup and 1/3 cup fine cornmeal, stir well, let stand for 20 minutes or until thick. Heat 1/3 cup frying oil in skillet. Drop batter by tablespoonsfuls into hot oil. Brown on one side, flip, flatten, brown on other side. Drain and serve hot or cold.

Beaked hazelnut

Hazelnut torte

Preheat oven to 350 degrees. Beat 11 egg yolks well, add 1 pound confectioner’s sugar, continuing to beat. Add 1 pound ground hazelnuts and 1 tsp. instant coffee. Fold in 11 stiffly beaten egg whites. Bake in 12 inch greased and floured spring baking form for 50-60 minutes.

Hazelnut apple pancakes

In bowl combine 1 1/4 cups flour, 1/4 cup hazelnuts (toasted and finely ground), 2 tsp. baking powder, 1/2 tsp. baking soda, 1/4 cup applesauce, 1 egg, 1 1/3 cup nonfat milk, 1/2 tsp. vanilla. Stir until it comes together. Cook on hot griddle.

Fall harvest opportunities

Introduction

Over the last two years, GLIFWC has been interviewing tribal elders regarding the non-medicinal uses of plants. Elders discussed hundreds of plants and uses. With approval from the elders, we will be sharing this information as a regular feature in Mazina’igan in the form of a seasonal harvest guide. In this issue, the harvest guide will be devoted to those plants that may be gathered during the summer months of waatebagaa-giizis, leaves changing color moon (September); binaakwii-giizis, falling leaves moon (October); and gashkadino-giizis, ice is forming moon (November).

Fruits

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

atitieman—nannyberries
masiikiigminna—cranberries
anibinim—highbush cranberries
minesag—lathoph berries
asasaweman—chokecherries
bagwa jhoominan—wild grapes

Nuts

raw, roasted, flour, pie fillings

waawwaye bagaanaag—black walnuts
bagaanaak bagaanaag—butternuts
wakikaanag bagaanaag—pine nuts
bagaanaag—hazel nuts
mitigwaabik bagaanaag—hickory nuts
mitigomizh bagaanaag—oak acorns

Grains

casseroles, soups, breads, pancakes

manoomin—wild rice

Roots

roasted, sauteed, steamed, boiled

waabiizipin ojibikan—arrowhead roots
okadaakoon—wild carrots
oga da mun ojibikan—yellow water lily roots
bagwaj zhigaagawimizh—wild leeks
bagwaji zhigaagananizh—wild onions
apakweshkway ojibikan—cattail roots
anaakanshk ojibikhon—bulrush roots
anaakanshk ojibikhon—rush roots

Greens

raw, sauteed, steamed, boiled

*watercress leaves

Cold Beverages

asasawemnan—choke cherries
bagwaj jhoominan—wild grapes
apaakwaanaatig minesan—sumac fruits
masiikiigminna—cranberries

Tea

oginiig—rosehips
apaakwaanaatig minesan—sumac fruits
wiinisiibag minesan—wintergreen berries
wiinisiibag anibishan—wintergreen leaves
masiikogob anibishan—swamp (Labrador) tea leaves
kaakaagwanzh anibishan—hemlock leaves
zhingob anibishan—balsam fir leaves
ghiizhik anibishan—white cedar leaves
okwemin nagek—black cherry bark
asaawemin watagwanaan—choke cherry twigs

Utility Items

mazanaatigoons—nettle stems (twine)
*anglicic stems (whistles)
giiziso-mashkiki inaskoon—goldenrods stems (pipes)
apakweshkway waabigwanin—cattail flowers (torches)
nookwezigan waabigwanin—fleabane flowers (smoke attracts deer bucks)
apakweshkwey anibishan—cattail leaves (weaving)
aaakanshk inaskoon—bulrush stems (weaving)
aaakanshk inaskoon—rush stems (weaving)
mashkodewashk anibishan—wild sage leaves (smudge)

Commercial Products

gagigebag—princess pine
zhingob watagwanaan—balsam fir boughs

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 plant before eating it.

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 it. In addition, those elders can also help you in different uses of these plants.
Wisconsin wolf population climbs

By Peter David, GLIFWC Wildlife Biologist

Wisconsin's elk herd comes through winter in fine condition

Hayward, Wis.—Wisconsin's elk herd came through the winter in excellent condition, according to state wildlife officials who estimate the herd to now be between 85 and 90 animals.

Laine Stowell, a wildlife biologist and elk specialist for the state Department of Natural Resources said that although the state's elk appear to have survived the winter, he added that because the weather was mild—causing little or no stress on the elk—the numbers may be "vigorous, healthy calves this spring.

Most of the elk are within a 20-mile radius around Clam Lake in Ashland County. A herd of 25 elk were released in the area in 1995 to reestablish the animal in the state.

Stowell said researchers were busy over the winter monitoring radio-collared elk, and trapping elk to place new or replace worn radio collars on them and conduct an aerial herd census. "Alberta and Wisconsin are working together as the Turchin Program to monitor elk in the Midwest."

Elk staff conducted ground telemetry location surveys of on elk on 13 days, 26 telemetry mortality checks and four days of aerial telemetry surveys. "During these surveys we made about 293 elk telemetry locations in the Clam Lake area, 86 individual elk mortality checks," Stowell said. The latter determine if any elk have died or if collars were removed. "Individual animals can then be collared, a blood sample taken and inoculated for any diseases."

A total of 31 elk were caught. Six of these were recaptured elk from this year or previous years. Stowell said of interest to the researchers was that eight of the adult cow recaptures were of the original 16 female elk re-collared in 1995.

As part of elk research efforts, University of Stevens Point researchers also went into nine bear dens in the Clam Lake area. The elk and bear management plans call for off-years to be traps in an effort to bring elk into the corral through a passageway with doors that shut behind them. Individual animals can then be collared, a blood sample taken and inoculated for any diseases.

"The stakeholders had an extensive discussion about depredations to bear hunting dogs. Currently, hunters who lose dogs can be reimbursed for their losses, something that many stakeholders felt was inappropriate—even if it is difficult to change this without legislative action."

At the other end of the spectrum, a representative for the Bear Hunters Association felt strongly that wolves that kill bear dogs should also potentially be subject to lethal control, even in instances where the dog had been killed on public land. However, there generally was strong sentiment against this by other stakeholders, and the guidelines were left as they were, stating that wolf control in the case of dog depredations would only occur if the dog attacked was leashed, confine, or under the owner's control on the owner's land.

The proposed guidelines touch upon a number of other details, including:

| On private lands in Indian Reservations, and any area surrounding the reservation negotiates with the tribe and the state, the state will consult with the tribe before trapping and dispatching wolves. Trapping on tribal lands will only be done at the tribe's request. |
| Trapping could occur up to 1/2 mile from a depredation site in wolf zones 1 and 2, and up to 1 mile from a site in zones 3 and 4. |
| The duration of trapping will be at the discretion of federal Wildlife Services staff—generally up to 15-21 days. |
| Any wolf-dog hybrids that are trapped will be dispatched; dogs will be turned over to town chairmen, the owner, or animal shelters. |
| The guidelines were also clarified with regards to the requirement for a farmer to sign a "depredation management plan" before lethal control would proceed. This is likely to be a fairly simple document, but would allow any obvious animal husbandry problems to be addressed. An example might be a farmer who drags dead livestock to the "back 40" where they might serve to attract wolves. |

For a full copy of the depredation control guidelines, contact Adrian Wydeven of the WDNR at (715) 762-3204.
Surveying sharpies in the Moquah Barrens

By Peter David
GLIFWC Wildlife Biologist

Moquah, Wis.—Light was already beginning to tinge the cloudless eastern sky—but more than I liked—when we pulled up near the dancing ground a little before 5:00 am. Though we had driven the last quarter mile or so without headlights, the half moon provided more than enough light to follow the familiar two-track to the low spot where we parked the car.

I grabbed the duffel bag we had packed the night before with blankets, snacks, binoculars and flashlight, while my 11-year-old son reached for the thermos of hot chocolate, and we stepped out. Slowly but firmly, we pushed the doors shut, and then stood listening.

The first lung-full of dawn air woke us more than dressing or the drive had. Plenty fresh for the first week of May.

Almost instantly, however, my fear of being a bit late was confirmed with the sound of gentle booming. The sharp-tails were already on the dancing grounds—or what biologists refer to as a lek. “We gotta move fast,” I whispered to Ben, “and no lights.”

Walking quickly, we ascended the small rise and approached the edge of the display dance, obscured all but the white tail-tips through the brush, and the water had pooled into the center of the canvas roof.

Overnight it had hardened into an ice mass weighty enough to sag the roof, and then the canvas envelope back in place. Now it was time to sit still.

We didn’t have long to wait. Within minutes, a male strutted into the small opening directly in front of us, seemingly oblivious to the disturbance we had caused. The peak of his white triangular tail aimed for the heavens, while his extended wings arced downward near their tips.

Then the dance itself began, a rapid fire blur of thumping footwork, paired with booming calls produced in the extended purplish neck sacs, and a flashing of the yellow combs above the eyes.

His display seemed to trigger other birds into action. A second bird emerged to our left, and the two came together. Both hunkered down, breasts flattened to the earth, like squat tanks facing off. Both birds issued a new call, an almost purring-like communication, that seemed to be reserved for these challenges.

A sudden exchange of pecks left a small feather lying on the lek, then each bird moved back towards the core of its small display territory on the dancing grounds, seemingly having lost interest in the fight. The sun arrived and slowly climbed behind us, the display continued. It was difficult to count the total number of birds dancing since the brush, which was getting a bit thick for sharpies, obscured all but the white tail-tips of some birds from being seen.

We also had other birds dancing to the side of, or behind the blind where we had no viewing holes, but the lek appeared to be holding 10-12 males—the only gender to strut their stuff in this annual spring show.

Not that females were lacking, though probably explains the sustained intensity of the performance to which we were privy. At one point a trio of hens came sashaying through the heart of the lek like a party of tight-knit sisters, driving the males to a maximum of display motivation. But at least on this morning they were playing hard to get. Flittering into low willows to pluck frosty pussy toes, seemingly oblivious to the three showy males that had converged to surround them with their aerial display.

Our time passed quickly; son absorbed by the wonder of evolution playing out before him—and father silently wondering if his son would be taking some lesson from this morning into his upcoming years of courtship. Maybe, maybe not, and maybe it didn’t matter, because right then we were just happy to be sitting together cold-toed, sipping hot cocoa, and watching the sharp-tails dance on the barrens.
GLIFWC initiates water quality study on eight frequently speared lakes

By Sue Erickson, Staff Writer

Odanah, Wis.—As part of GLIFWC’s ongoing effort to document and understand mercury contamination in walleye, a water quality study on eight Federal Energy Regulatory Commission (FERC) waters used by tribal spearers was initiated this spring.

Funded by a grant from the Administration for Native Americans (ANA), the study is searching for correlations between water quality and mercury contamination levels in walleye in waters with FERC dams.

Concern about the health risk related to consumption of fish with high levels of mercury has prompted GLIFWC to test walleye fillets from speared lakes and provide mercury level maps to tribal members which indicate mercury levels in specific lakes.

Testing results on some water bodies have shown a great deal of fluctuation from year to year as far as what size of fish is safe to eat, especially for children, pregnant women and women in their childbearing years.

For example, the Turtle Flambeau Flowage provides tribal members with the most walleye from a single lake in Wisconsin, about 2,200 walleye per year. However, tests reveal sufficiently high mercury walleye concentrations to warrant consuming them only occasionally, especially for children, pregnant women and women in their childbearing years (sensitive population).

GLIFWC’s Environmental Section has observed statistically significant differences between years of testing for mercury levels in fish harvested from the Turtle Flambeau Flowage by tribal members. These shifts significantly change the size of walleye available to the sensitive population for unrestricted consumption.

Since 1999 and a size recommended level was eliminated, the walleye size dropped for 16 inches to 12 inches. But in 2000 unrestricted consumption would be allowable up to 18 inches.

This study is designed to look at several factors that may relate to mercury levels in the lakes and help understand reasons for fluctuating test results. Some of the factors to be studied include the physical characteristics; e.g. wetlands which may contribute methyl mercury to the lake; water quality, and water level fluctuations.

Ed Kolołdziejski, ANA field assistant, and Kory Groetsch, environmental biologist, will be testing water quality in the eight selected lakes this summer into

Mercury regulations under development in Wisconsin

GLIFWC pushes for greater mercury reductions

By John Coleman, GLIFWC Environmental Section Ldr.

Odanah, Wis.—Great Lakes Indian Fish & Wildlife Commission (GLIFWC) staff have been participating in committees advising the Wisconsin Department of Natural Resources (WDNR) on issues of mercury emissions in Wisconsin waters and air.

Since early in 2001 staff have discussed new rule provisions being considered by the WDNR regarding the discharge of mercury in industrial and municipal waste water.

GLIFWC staff have taken the position that dischargers should be required to reduce the mercury content of their discharges. Until that discharges are reduced, the state standard for industrial water was set at 1.3 ng mercury per liter of wastewater.

The new provisions would permit a variance from the 1.3 ng mercury per liter of wastewater standard under certain conditions.

In order to obtain the variance that standard dischargers would be prohibited from increasing their discharge of mercury, would be required to sample for mercury in their wastewater, and would be required to demonstrate that they are making an effort to reduce mercury.

Since 1999 GLIFWC staff have participated in discussions with the WDNR about goals and regulations for reduction of mercury emissions to the air by industry and electric power producers.

In June of 2001 the WDNR proposed rules that would require a 90% reduction in mercury emissions by major power producers within 15 years. The Wisconsin Natural Resources Board required that the WDNR staff discuss the provisions of the rule with industry and others.

GLIFWC staff have participated in discussions with the WDNR, industry and environmental organizations to develop recommendations on the proposal.

GLIFWC staff have argued for greater reductions in both the short and long term than were proposed by the WDNR. Industry representatives have proposed a 10% reduction in 5 years and a 40% reduction of mercury emissions in 10 years.

This compares to the WDNR’s proposal of 30% reduction in 5 years, 50% in 10 years and 90% reduction in mercury emissions in 15 years. The WDNR will be making their final recommendation for mercury reduction rules to the Wisconsin Natural Resources Board in the fall or winter of 2002.

Finally, because mercury does require several months to be eliminated from the body, women of childbearing age should follow the more restrictive advice given to pregnant mothers.

Who is most at risk?

Mercury is neurotoxic (toxic to nerve cells); it affects the brain and spinal cord. The fetus is the most at risk from exposure to too much mercury because its nervous system is developing.

Therefore, women who are pregnant or are breastfeeding should follow fish consumption advisories to keep their mercury exposure low and at safe levels for their young and soon-to-be-born children.

However, pregnant women and breastfeeding mothers should not avoid all gig抱ous (fish), because nutrients in gig抱ous especially oily gig抱ous, may be important for the mental development and vision of babies. Lake Superior whitefish and herring contain these beneficial nutrients and are low in mercury.

Children under the age of 15 years old are still forming new brain tissue, and for this reason are also at a higher risk from mercury exposure than an adult. Therefore, children under 15 years of age should follow the more restrictive advice given to pregnant mothers.

Finally, because mercury does require several months to be eliminated from the body, women of childbearing age should follow the same advice as pregnant women, breastfeeding mothers, and young children. Thus, if they become pregnant, their fetus will be protected from mercury.
Preventing the spread of aquatic nuisance species: the focus of workshops

Aquaculture, fish stocking, and wild baitfish harvest may pose risks for spreading aquatic nuisance species (ANS) based on the movements with fish, fingerlings, larvae, eggs, and water that can potentially spread ANS. Knowing whether your operation is at risk is the first step in the ANS-Hazard Analysis Critical Control Point (HACCP)—pronounced “has-sip”—process.

Hatchery and baitfish operations are diverse and complex, as are the risks for spreading ANS. Most operations pose a very low risk, however, without adequate risk assessment of individual operations, unwanted species may be inadvertently spread. Examples of species that may spread via such operations include: gizzard shad in the Southwest, New Zealand mudsnail in the Northwest, and white perch in the Great Lakes region. For private businesses, regulations could be imposed that would negatively impact them and still not effectively reduce the risk of spreading ANS.

In fact, some natural resource management agencies have closed ANS-infested lakes to harvest and culture; some states have banned importation of live bait, and others only allow shipments of ANS-free certified bait into their state.

ANS-HACCP is a flexible approach that stresses appropriate procedures and verification that can ensure that operations pose minimal risk for spreading unwanted species.

One approach to this problem is to adapt the HACCP concept used by the seafood industry to minimize seafood consumption health risks. Advantages of this approach are that it manages a diverse industry, fosters partnership between industry and government regulators, and is effective if properly applied.

The approach concentrates on the points in the process that are critical to the safety of the product, minimizes risks, and stresses communication between regulators and the industry. And most importantly, it requires records be kept and procedures verified, which provides assurance that the ANS-HACCP plan is being followed and that it is working.

Several regional ANS-HACCP Training Workshops will be hosted by the U.S. Fish and Wildlife Service and state natural resource management agencies in 2002 and 2003. Participation in the workshops will receive a training manual, companion video, and other materials.

Coursework is designed to train fish farmers, bait harvesters, and management agencies in the use of ANS-HACCP fundamentals to control the spread of ANS via hatchery, fish farming, and baitfish operations. HACCP is an approach that brings together management agencies and industry representatives to establish a plan to prevent the spread of ANS.

It can also be used to certify ANS-free products for those businesses that choose to seek this certification. These workshops will provide the information necessary for those involved in fish stocking, aquaculture, and baitfish operations to learn how to apply ANS-HACCP principles.

The ANS-HACCP approach was adapted from the National Seafood HACCP Alliance for Training and Education by members of the Great Lakes Sea Grant Network through a grant from the National Oceanic and Atmospheric Administration (NOAA) to the National Sea Grant College Program.

For more information on dates, times and locations for a regional workshop near you, contact Phil Moye, Wisconsin Sea Grant, at (920) 683-4697.

Seven HACCP principles

1) Conduct a hazard analysis.
2) Identify the critical control points (CCP) in the process.
3) Establish controls for each CCP identified.
4) Establish CCP monitoring requirements.
5) Establish corrective actions to be taken when monitoring indicates that there is a deviation from an established critical limit.
6) Establish procedures to verify that the HACCP system is working correctly.
7) Establish effective record-keeping procedures.

ANS-HACCP hazards

An aquatic nuisance plant, invertebrate, or fish (or other aquatic vertebrate) that is reasonably likely to be transported by aquaculture or baitfish harvest and establish reproducing populations that could negatively impact existing species, recreation, or other existing use of water resources in the absence of its control.

Common herbicide linked to sexual side effects in frogs

By Cat Lazaroff, Environmental News Service

Berkeley, Cal.—Atrazine, the top selling weed killer in the United States, disrupts the sexual development of frogs at concentrations 30 times lower than levels allowed by the U.S. Environmental Protection Agency (EPA). The researchers who uncovered the problem join environmentalists in expressing concern about heavy use of the herbicide on corn, soybeans and other crops in the U.S. Midwest and around the world.

University of California at Berkeley developmental endocrinologist Tyrone Hayes and his colleagues report that exposing male tadpoles to atrazine in the laboratory, using levels often found in the environment, demasculinizes the tadpoles, preventing male characteristics from fully forming. The atrazine exposure turns the tadpoles into hermaphrodites—creatures with both male and female sexual characteristics.

The herbicide also lowers levels of the male hormone testosterone in sexually mature male frogs by a factor of 10, to levels lower than those found in normal female frogs. As Hayes later discovered, many atrazine contaminated ponds in the Midwest contain native leopard frogs with the same abnormalities.

“Atrazine exposed frogs don’t have normal reproductive systems,” Hayes said. “The males have ovaries in their testes and much smaller vocal organs,” which are used in calling potential mates.

In an article in the “Proceedings of the National Academy of Sciences,” Hayes and his colleagues note that it is unclear whether these abnormalities lead to reduced fertility. Hayes now is trying to determine how the abnormalities affect the frogs’ ability to produce offspring.

The use of atrazine in the environment is basically an uncontrolled experiment—there seems to be no atrazine free environment,” Hayes said. “Because it is so widespread, aquatic environments are at risk.

More than 60 million pounds of atrazine were applied last year in the United States alone. Manufacturer Syngenta estimates that farmers use the herbicide to control weeds on about two-thirds of all U.S. farm acres planted with corn and sorghum. On average, atrazine improves corn yield by just over four percent.

Atrazine has been considered safe because it decomposes rapidly in the environment and, being water soluble, is quickly eliminated from the body.

Aquatic species, however, swim and breed in atrazine contaminated field runoff. Though previous studies showed deformities and abnormalities in adult amphibians only at very high doses, no one had looked in detail at hormone levels in frogs or at effects on tadpoles, the larval stage of frogs.

The findings come at a time when the EPA is reevaluating allowable levels of atrazine in drinking water, which stand today at three parts per billion (ppb). The EPA has drafted new criteria for the protection of aquatic life, limiting four day average exposures to 1.2 ppb. Hayes found hermaphroditism in frogs at exposure levels as low as 0.1 ppb. Levels of 40 ppb of atrazine have been measured in rain and spring water in parts of the Midwest, while atrazine in agricultural runoff can be present at several parts per million.

The herbicide also contaminates drinking water supplies in many communities in the Midwest, leading some environmental groups to voice concern about its effect on children, infants and the developing fetus. France, Germany, Italy, Sweden and Norway are among the nations that have already banned the use of atrazine.

(This article is reproduced from envi-news.com/usa/2001/05/15/06.html.)
Letter to the Editor

Dear Editor:

I have listened to the “mascot” debate for years now. I think I just realized why awards and honors are often given posthumously—the honoree cannot disparage the source of the award or otherwise decline the honor, and surviving relatives usually do not feel competent to argue that what is offered is not an honor.

Surely it is obvious that sports teams be named after respected historical people in order to give the team some credibility and borrowed valor from this naming. The naming honors the source of the name only indirectly, as imitation indirectly honors that which is imitated.

If public relations people desecrate this honor by creating pathetic or comical mascots, this should be discouraged and is a proper situation for native americans, pacific islanders, africans, and others to affect minorities to protest.

But don’t throw the baby out with the bath water! Think of how listless and basically misleading our joint history would be to our generations to come if they knew only what the history books mentioned of the Apache, Geronimo, Crazy Horse, Bravos, Indians, Redmen, Chiefs—people who were put in impossible situations but who gave the finger to the “authorities” and earned the respect of the world: survivors, foes, and observers alike.

Jim Kurz
Ladysmith, Wis.

Opportunities for future Indian journalists

American Indian students will be paid to write for their school newspaper even if their tribal colleges don’t have one.

Reznet, a new on-line newspaper, will hire 20 Native American college students around the country as reporters and pay them $50 a story to cover their tribal communities or colleges. “Reznet” reporters potentially can write one story per week, earning as much as $200 per month. Some of the reporters also will receive digital cameras.

Transmitting the stories and photos to the newspaper will be done via email. In addition to salary, the Reznet will provide training to the students for their work, making the project the first distance-learning journalism course available to tribal colleges.

While the intent of Reznet is to produce more Natives entering professional journalism, project organizers also hope the newspaper will become an important, popular and crowded place for Native students to gather on the internet.

I really believe it will make a difference,” said Denny McAuliffe, Reznet project director. The electronic newspaper’s first edition is available at www.reznetnews.org.

Reznet became a reality earlier this year when the John S. and James L. Knight Foundation funded McAuliffe’s project. Before stories are published in the on-line publication, teaching student journalists from a distance via email or the telephone is where the teaching of journalism will transpire, said McAuliffe. McAuliffe will be chief editor of the Reznet newspaper, he said, they will be subjected to thorough editing. The give-and-take of the editing process over email or the telephone is where the teaching of journalism will transpire, said McAuliffe.

Ultimately, the publication will provide aspiring Native journalists with clips, which can help them get internships that will help them get jobs. Said McAuliffe, “We believe that Native journalists have a lot to offer,”...
The Honorable Judge Edward Barber (May-dway-osh) walks on
His legacy of wisdom, courage and kindness whispers in the wind

By Sue Erickson

The North American Indigenous Mining Summit
Mole Lake SokaagomCHIPewa Community
(Wisconsin site of the proposed Crandon mine)
June 12-15, 2002

The North American Indigenous Mining Summit is hosted by the Sokaagan CHIPewa Community. The event is co-sponsored by the Sokaagan CHIPewa Community and the Indigenous Mining Campaign Project which is a partnership between the Indigenous Environmental Network and Project Underground. The Purpose of the mining summit is to bring indigenous people together from across Turtle Island (United States, Canada and Mexico) to develop strategies (a strategic working document) to empower their communities to form and create perpetual alliances and networks with each other and our allies.

Focus:
The mining summit will focus on hard rock mining, gold mining, uranium mining, coal mining and other mining on and near indigenous lands. It will also look at the issues currently besetting the mining issue with an emphasis on changing legislation. The summit will be a consolidation of knowledge from indigenous people and their non-native allies, which will produce a working document (schematic) to help the child to grow and learn at his own pace, not ours."

Objectives:
- "Uniting to address mining in Indigenous Country"
- with emphasis on "Preserving Mother Earth by empowering her peoples."
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Other topics:
- How mining and mining extraction affects and effects human rights, tribal sovereignty, government to government relationships with the federal government and its agencies, state/provincial and federal legislatures, sacred sites, traditional knowledge, local and federal policy and decision making, the World Trade Organization, NAFTA, ICC, World Summit on Sustainable Development and Globalization. US discussions on treatment as state, policies on historical, cultural and sacred sites and delegated authority.

Volunteers:
- For security, cooking, daycare, first aid and Sacred Fire keepers.

Donations:
- Monetary, posting information/flyers in your newspaper and on your work web sites, airtime on radio stations, and food.

For more information contact Colleen Poler (715) 478-5033 or e-mail mns@lgc.org or polerdnc@newnorth.net.

This is a traditional gathering with a Sacred Fire and focused workshops. No drugs or alcohol allowed. Outdoor camping. Daycare will be provided. Bring you own dishes and utensils. No dogs or pets allowed.

A man of many interests and skills, Judge Ed Barber, LCO, was at home at sugar camp in the woods or behind a lecturn. Fluent in Ojibwemowin, he also pursued many traditional Ojibwe activities such as maple sugaring. He generously shared his knowledge of both. (Submitted photo)

Judge Barber is survived by his three daughters, Valerie Barber, Hayward; Darlene (Rodney) LaRose, Eau Claire, and Rosanne Charlotte (Bruce) Barber-Minano, Hayward; and two granddaughters, Amy Barber and Ruth LaRose; and many nieces and nephews.

Barber then began a long career in education as a teacher and principal. His career in education brought him to Portage and Red Lake in Minnesota, and Pierre Indian School and Thunder Butte in South Dakota, where he was also a government agent for 23 families.

In 1965 he returned to LCO reservation and worked for the Job Corps, teaching reading and driver's education at the camp in Clam Lake and later at Blackwell Wisconsin. He then took a position as a public health educator, which put him on the road throughout the upper Midwest.

In 1972, Alberta began teaching Ojibwa language at the Lake School, Hayward School District, and Ed worked for two years as the home-school coordinator. He received a degree from the Parent Education Program, UW-River Falls and subsequently helped "at-risk" students from northern Wisconsin reservations. He also served on the advisory board for Mount Senario College, Ladysmith, Wis.

Ed's life took a new twist when the LCO Tribe asked him to serve as the tribal court judge. Since the Tribe had no money to pay him as judge, he worked as an employment clerk for a time. Meanwhile he attended numerous judicial training sessions nationally. He became chief judge for life for the LCO Tribe and an appellate court judge for other tribes.

He also served on the LCO Ojibwe Community College Board of Regents and the Great Lakes Education Council. He was a member of the Veterans of Foreign Wars post in Hayward and the vice president of the LCO AARP.

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MAZINA’IGAN is a quarterly publication of the Great Lakes Indian Fish & Wildlife Commission, which represents eleven Chippewa tribes in Michigan, Minnesota, and Wisconsin. Subscriptions to the paper are free. Write: MAZINA’IGAN, P.O. Box 9, Odanah, WI 54861, phone (715) 682-6619, e-mail: pio@glifwc.org. Please be sure and keep us informed if you are planning to move or have recently moved so we can update our mailing list to ensure we are delivering copies to your address.

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