

*Newsletter of the Chippewa Ottawa Resource Authority, 'Conserving for Future Generations'*

"In the Spirit of the Lakes" 2003 National Conference of the Native American Fish and Wildlife Society was hosted by the Grand Traverse Band of Ottawa Chippewa Indians. The event took place from May 19 through May 22 at sites in Peshawbetown, Traverse City and Acme.

This year, the Great Lakes Region Shoot Team won the National competition shoot. The sharpshooters for this event were GTB's own Bill Bailey and Jim Chambers, Bay Mills' Bill Schofield, and Red Lakes' Charles Grolla.

Robert Jackson was Master of Ceremonies. Also on hand for the event was GTB Chairman Bob Kewaygoshkum, NAFWS President Ron Skates and Executive Director Ira New Breast.

At the regional meeting prior to the national event, Regional Directors Faith McGruther and Don Reiter presented Bay Mills Conservation Officer Bill Schofield with the Conservation Officer of the Year Award. Reiter himself was honored with the Biologist of the Year award.



Photo Courtesy Ben Carrick

**THE SHARPEST** — The Great Lakes Shoot Team made up of Jim Chambers, Charles Grolla, Bill Schofield and Bill Bailey (L-R) took the National Shoot Competition.



Photo Courtesy Dave Spinneken, Grand Traverse Band News

Co-Regional Directors Faith McGruther and Don Reiter. Reiter also garnered the Biologist of the Year Award.



Photo s Courtesy Dave Spinneken, Grand Traverse Band News

Above, Bob Kewaygoshkum, chairman of the hosting tribe, Grand Traverse Band, takes the podium. Below, the shoot out.

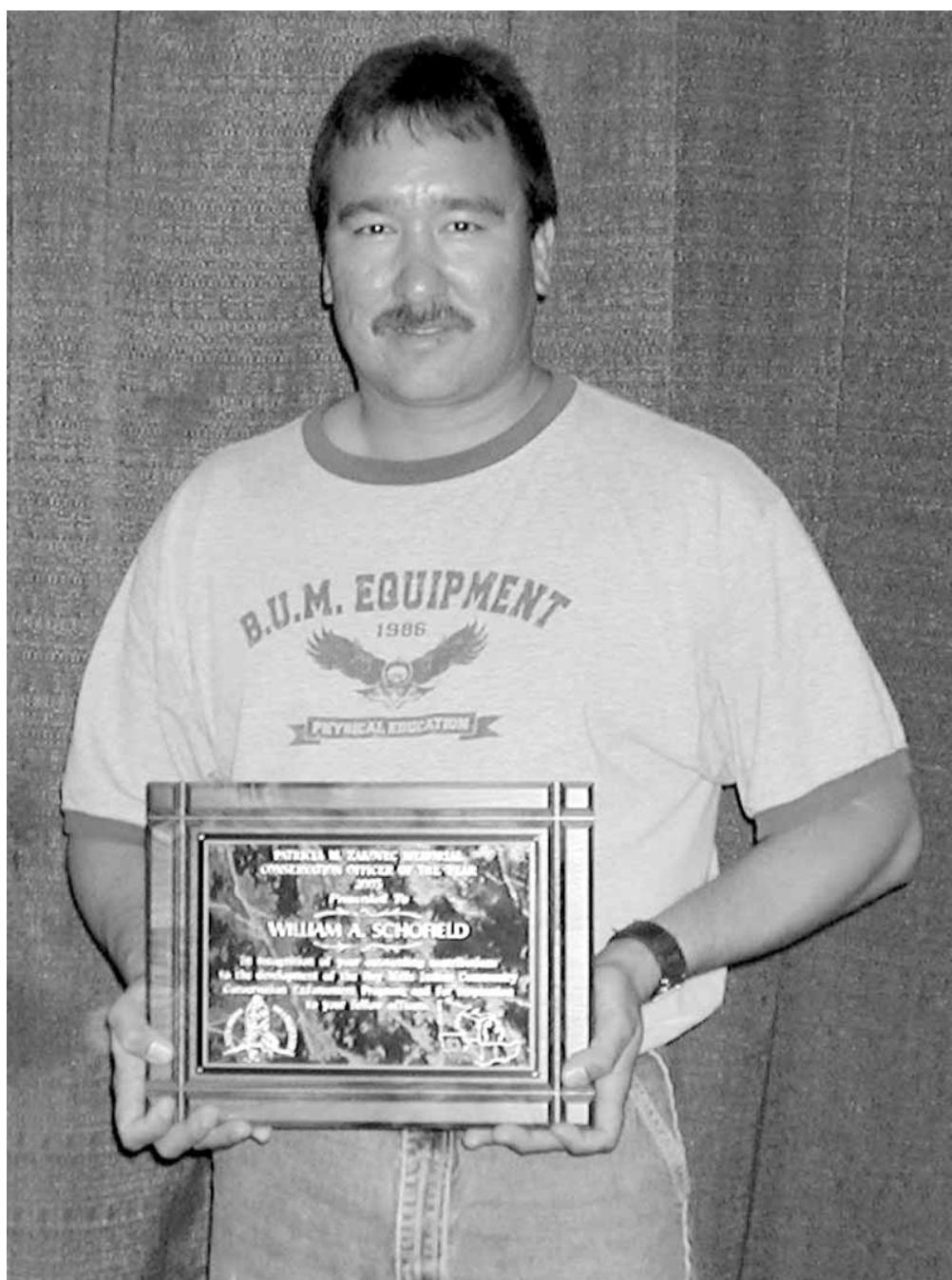


Photo Courtesy Ben Carrick

Bill Schofield was honored with the NAFWS Great Lakes Region 2003 Conservation Officer of the Year.

# CORA meeting briefs ...

## CORA meets April 24

The Chippewa Ottawa Resource Authority (CORA) met April 24, hosted by Sault Ste. Marie Tribe of Chippewa Indians. In attendance were Bay Mills Tribal Chairman L. John Lufkins and Conservation Chairman Dave Menominee; Grand Traverse Band Chairman Robert Kewaygoshkum and Natural Resource Commission Chairman John Concannon; Little River Band Natural Resource Commission Chairman John Koon with Bob Heidenburgh sitting in for Chairman Johnny Sams; Little Traverse Bay Bands Chairman Gerry Chingwa with Jordy Johnson filling in for Natural Resource Commission Chairman John Keshick Jr. Sault Tribe Conservation Chairman Vic Matson was absent due to car trouble on the way to the meeting.

The meeting was chaired by Lufkins and CORA Resource Developer Bucko Teeple gave the invocation.

Public Information & Education Officer Jennifer Dale reported producing an 8-page "Tribal Fishing" newsletter. The theme of the inner four pages was the health benefits of eating Great Lakes fish, produced in conjunction with Environmental Coordinator Mike Ripley. She said it would be developed into a fact sheet for the Internet (along

with the latest contaminant results when they are ready). Ripley and ITFAP Director Tom Gorenflo said they would like to see a brochure developed from the material. A discussion ensued on the need to get the word out on the positive results of the long term contaminant study, especially the extremely low mercury values. They also discussed the success Alaskan fisheries seem to be having in this regard.

Dale attached a letter to all the conservation entities asking for a list of fishers interested in participating in a retail listing. She is also planning to overhaul the website, appear as a panelist at a GLFT fishery education network conference; and has finished a review of the Life of the Lakes curriculum revision.

CORA Executive Director Jeff Parker reported an upcoming Sustainable Fisheries Conference planned for Sault Ste. Marie's Lake Superior State University June 25 and 26 that gives the tribes an opportunity to present themselves as equal players in the Great Lakes basin. He discussed tribal speakers for the conference.

Parker said the U.S. Coast Guard is interpreting the regulations to require all commercial fishers to have immersion suits onboard their vessels. He wanted direction on how to proceed. The board approved a motion to deal

with the issues as CORA.

Interpretation of the regulations changed three times (since they became effective in 1999). At first, a blanket exemption was given, then exemptions were given on a case-by-case basis. Now, all fishery vessels are being treated like ocean going vessels and required to keep immersion suits on hand.

Fred Paquin said CORA should get on this issue right away, because tickets will soon be issued. He added that the requirement is uncalled for — there is a distinction between being safe and making uncalled for requirements. Trying to don an immersion suit on a sinking boat isn't even effective, he said.

Parker presented a spending proposal for \$10,000 from the Bureau of Indian Affairs for Chronic Wasting Disease in deer. The council approved hiring Aaron Tadgerson for the summer — a current LSSU employee who is Anishnabe and has experience with CWD.

The board then had a lengthy discussion about how each tribe should fund CORA. Chingwa made a motion to rescind a March 31 motion to fund CORA administration equally from the five tribes. He proposed instead that each tribe pay reflective of the monies each tribe receives, calculating 12 percent from LTBB.

Paquin said he had a hard time voting until he saw actual figures. He urged that the CORA budget stand — the staff is working on a thin budget now. Both he and Lufkins said their tribes would be receiving less money. But Lufkins said the CORA budget is a drop in the bucket to fulfill the tribes' responsibilities.

Parker said he would be willing to take a pay cut. He urged the five tribes to stick together. Lufkins said cutting back would just cause problems down the road. He added that the CORA budget is 'peanuts' compared to overall tribal budgets and that they should support CORA and let the staff do their jobs.

Chingwa said he would go back to his tribal council. LTBB Attorney Allie Maldonado added that they need money for tribal members and to build their fishery programs. The others commiserated with similar experiences but urged that all tribes need to stick together to support CORA. Chingwa withdrew his motion.

Tom Gorenflo described three research grant proposals to be submitted by ITFAP, which all name CORA as the principle investigator for each project. ITFAP staff would assist. The first is "Determination of the depth and thermal habitat used by chinook salmon," for \$40,000. The second is Lake Huron whitefish distribution study," \$80,000 a year for three years. The third is "Whitefish research coordination workshop meetings," \$22,500 over three years.

The board approved all three.

## GLRC meets April 24

The Great Lakes Resource

Committee met following the CORA meeting and with the same members present. Birthday wishes were made to John Concannon and L. John Lufkins.

In Conservation Reports, Dave Menominee for Bay Mills reported that the tribal biologist has taken another position. The committee met to discuss MH-1 issues and recommend lake trout bag limits. Jordy Johnson for Little Traverse reported reviewing the MOU with the USCG, working toward signing on. Vic Matson had called in with car trouble on the way to the meeting; Sault Tribe's attorney reported in-house matters for Sault Tribe. John Koon for Little River reported in-house matters plus reviewing and updating a three-tribe code. He invited Sault Tribe and Bay Mills to a three-tribe meeting May 29. John Concannon for Grand Traverse reported in-house matters plus a meeting on the conversion problems. He reminded everyone about the upcoming Native Fish & Wildlife Society conference, which he said Grand Traverse had the honor to host.

In Biologists Reports, Scott Koproski for Bay Mills, who is leaving his position, thanked everyone, saying he learned a lot and gained a lot of experience. He reported lake trout and whitefish sampling in the Lake Huron tribal unit. He is working on getting all his ducks in a row for a smooth transition, coordinating with Sault Tribe to cover spring lake trout assessments and whitefish in Lakes Huron and Superior. Steve Lanart for Little Traverse reported getting ready for the field season, planning spring surveys in the next few weeks and moving toward finalizing a research project on lake trout.

ITFAP Director Tom Gorenflo reported on the state's proposal to increase walleye stocking in Big Bay de Noc for the stated purpose of increasing adult walleye to facilitate natural reproduction. Stocking proposals must go to the Technical Fisheries Committee, said Gorenflo, who responded to the proposal with concerns on the impact on whitefish populations. Also, the state does not have sufficient information on existing walleye. The state said it would send back a revised proposal.

Gorenflo reported that the 18-year-old Lake Michigan Lake Trout Rehabilitation plan will be revised to take into account changes in lake ecology, information on lake trout biology, and Consent Decree language.

Gorenflo said Wisconsin is leery of Consent Decree language, and that the process will probably be highly contentious. They will set up a lake trout task group that the tribal biologists could join.

Environmental Coordinator Mike Ripley reported that fish contaminant results for 2002 are back. Now in its 11th year, the project now has the most long-term database in the upper Great Lakes. The project rotates lakes. In 2002, Lake Huron was tested; next year's results will come from Lake Michigan. Ripley had good news: Lake

(See "CORA meetings," page 6)

## Chippewa Ottawa Resource Authority

### CORA Board, Officers and Committee officers

#### Bay Mills Indian Community (BMIC or Bay Mills)

L. John Lufkins, tribal chairman, CORA chairman  
Dave Menominee, Conservation Committee chairman

#### Grand Traverse Band of Ottawa and Chippewa Indians (GTB)

Robert Kewaygoshkum, tribal chairman, ILWRC chairman  
John Concannon, Natural Resource Committee chairman

#### Little River Band of Ottawa Indians (LRB)

Johnny Sams, tribal chairman, ILWRC\*\* vice chairman  
John Koon, Natural Resource Commission chairman

#### Little Traverse Bay Bands of Odawa Indians (LTBB)

Gerry Chingwa, tribal chairman, GLRC\* vice chairman  
John Keshick Jr., Natural Resource Commission chairman

#### Sault Ste. Marie Tribe of Chippewa Indians (Sault Tribe or SSMTCI)

Bernard Bouschor, tribal chairman;  
Alternate: Fred Paquin, Tribal Unit 3 director, Chief of Police, Law Enforcement Committee, and CORA vice chairman.  
Vic Matson Sr., Conservation Committee chairman, GLRC chairman

\* "Great Lakes Resource Committee," which serves as the inter-tribal management body for the treaty fishery in 1836 treaty waters.

\*\* "Inland Land and Waters Committee," which oversees inland resource matters.

### Chippewa Ottawa Resource Authority

Albert "Big Abe" LeBlanc Building  
179 W. Three Mile Rd.

Sault Ste. Marie MI 49783

Ph: 906-632-0043 Fax: 906-632-1141

e-mail: cora@up.net website: www.1836cora.org

#### CORA staff

Jeff Parker, executive director  
Jane TenEyck, assistant executive director  
Dwight "Bucko" Teeple, resource developer  
Bev Aikens, executive secretary  
Deanna Bowen, secretary

# LITTLE RIVER SPEARHEADS STURGEON LARVA STUDY IN MANISTEE RIVER

By Allison Batdorff  
News Advocate (Manistee)  
An AP Member Exchange  
BRETHREN, Mich. (AP) —

The Manistee River is home to many drifters. Every night, hundreds of thousands of them will converge upon the river, let loose their inhibitions, ride the current and generally go with the flow, as drifters are prone to do.

Yet most people will never catch a glimpse of them unless they get very close and very wet.

Every spring, tiny versions of fish and insects throw caution to the wind, cast off their moorings and bounce along the Manistee River on their path to juvenility in a phenomenon called "larval drift."

But recently, certain late-night drifters are being waylaid for an hour or so by the Little River Band of Ottawa Indians Conservation Department for some bruise-free scientific interrogation.

As part of an effort to study the endangered and threatened lake sturgeon, tribal scientists and technicians are collecting drifting sturgeon larva in nets set at varying depths at Sawdust Hole near Brethren. They are also picking up other drifters as well: salmonids (trout), sucker, lamprey and hexagenia to study the relationship between fellow drifters.

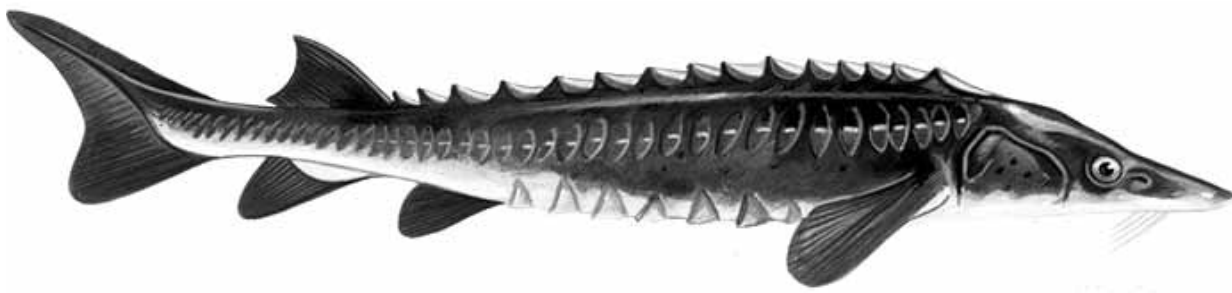
Preliminary data already shows that sucker, salmonid and sturgeon larva make great travel companions.

But what is keeping Conservation Department workers up all night, every night are the sturgeon themselves. Just 15-18 days old, the sturgeon only take up 16-21 millimeters of space, but their significance far outmeasures their size. After all, in time, lake sturgeon can grow up to six feet long and are considered the largest freshwater fish in the Great Lakes.

"Sturgeon are considered a 'grandfather species,' one that is as old as the creation stories in some of the Great Lakes tribes," said Little River Band fish biologist Marty Holtgren. "Our main objective is to have a sustainable amount of sturgeon back in the river."

Sturgeon are now believed to be at one percent of their original population and are listed as endangered or threatened in 19 of the 20 states they call home. In the Manistee River, where once there were miles of sturgeon spawning habitat, only 100 meters of suitable area remains. That male sturgeons don't begin to spawn until they are 7-14 years old and females don't spawn until they are 20 also complicates matters.

"When we put a larval sturgeon back in the river, we know we may not see them again for the next 20 years," said Michigan Technological University student Justin Chiotti, who is studying



Sturgeon image Courtesy Department of Fisheries and Oceans

sturgeon as part of his Master's thesis. "With other fish, it may be three or four years."

But the numbers of larval sturgeon Chiotti and the other scientists have seen lend optimism to the sturgeon plight. Last spring, the Little River Band caught and released 36 larval sturgeon, establishing the first documented report of reproduction in the Manistee River, and the west side of the state. This year, 28 larval sturgeon have already been counted and the drift is less than half over.

"This year is so exciting because now we can see trends," said Holtgren. "Hopefully this increase in larval drift is something we'll start seeing annually."

In typical drifter fashion, larval sturgeon are prone to go with the flow.

Because of this, Holtgren attributes the increase to positive changes in the Manistee's flow in relation to the relicensing agreement of Consumers Energy Hydroelectric plant at Tippy Dam.

"Sturgeon are keyed into the

historical flows and with peaking operations, sturgeon may have reabsorbed their eggs. We may see positive changes from the run of the river flows now practiced."

Bank stabilizations at Suicide Bend and added stones created a cobbled habitat that may also contribute to increased spawning activity, he added. But like teenagers, larval sturgeon are just going through a phase. And now, through a grant from the Great Lakes Fisheries Trust, the Little River Band has now expanded

their study to other sturgeon stages of development, like those before and after the larval phase.

Egg mats, the sturgeon version of a welcome mat, were set out for the first time this year at Suicide Bend to establish whether or not any spawning was occurring.

"Fishermen observed sturgeon around egg mats and we were able to capture eggs for the time on the eastern shoreline of Lake Michigan," said Holtgren.

Egg mats are decidedly low tech. They consist of a cinder block wrapped in furnace filter and a bungee cord. Because sturgeon are broadcast spawners they spew their eggs every which way. The adhesive eggs bounce along until they have something to stick to. The furnace filter catches the eggs, and from their number and placement, scientists can tell the difference between a healthy sturgeon population and a sick one.

"Young of the year" sturgeon, or the three-to-four-month-old fish, have also been targeted for research in the late summer.

"With sampling gear and small mesh gill nets, we are going to try to locate habitat and determine how long they are staying in the river before going out to Lake Michigan or Manistee Lake," said Holtgren. "We don't know much about the sturgeon this age. It's like a big black hole."

But though the scientists are heartened by the numbers, this research has dislodged some disturbing trends as well as good news.

Though 20-40 sturgeon are being caught annually, a healthy population would be more like 100 adults. Also, adult male sturgeon are outnumbering adult females 20-1, which makes for a poor spawning size and disproportionate population.

"We would like to see a more balanced male/female ratio," Holtgren said.

Strange placement of eggs on the mats also worried Holtgren.

"Many of the eggs have been clumped up and sticking together, which makes them not viable," said Holtgren. "Perhaps this is a function of high densities and that the sturgeon need more room to spawn."

However, with the help of a \$600,000 Environmental Protection Agency watershed initiative grant, the Little River Band will take this information and put it to use in future reclamation projects, Holtgren said.

In the meantime, every night for the next few weeks, the scientists' efforts will be trained on sending the drifters on their merry way.

"After we measure them, we wade them out deep in the river, just to make sure they are safe," said Chiotti. "I would like to see the population increase in my lifetime to where it was when my dad used to fish in the rivers."

## Little River gets \$.6 million grant for restoration projects

MANISTEE, Mich. (AP) — A northern Michigan tribe has received \$600,000 for restoration projects on the Manistee River Watershed.

U.S. Environmental Protection Agency Administrator Christie Whitman presented the money to the Little River Band of Ottawa Indians.

"The Little River Band was

chosen to receive this grant because they demonstrated the ability to achieve tangible environmental results in a short time," Whitman said.

The Little River Band was recently selected as one of 20 grant recipients in EPA's new Watershed Initiative. A total of \$15 million will go to watershed organizations to fund restoration and protection proj-

ects.

The Little River Band includes 2,600 tribal members. It will use its grant for several projects, including: repairing road and stream crossings, stabilizing stream banks, water quality monitoring, habitat inventories, fish assessments and reclaiming a sturgeon spawning site.



Photo courtesy Little River Band

**EPA Administrator Christie Whitman presented Little River Band of Ottawa Indians with \$600,000 for Manistee River Watershed restoration projects, accepted on behalf of Little River Band by Director of Natural Resources Bob Hardenburgh.**

# SAULT ANGLERS FINDING ATLANTIC SALMON RELEASED BY LSSU

SAULT STE. MARIE, Mich. — Disney fans who happen to catch one of the yearling Atlantic salmon released this year by the Lake Superior State University Aquatic Research Laboratory might notice something familiar about the appearance of the young salmon.

Each of the salmon released earlier this month is missing its right pectoral fin, much like Nemo, the clownfish starring in this summer's Disney hit film *Finding Nemo*. Aquatic lab officials didn't plan to produce Nemo look-a-likes. Each spring, when the lab stocks a new year class, it marks each salmon by clipping a fin. This year's class just happened to be in line to be marked with the right pectoral fin clip.

This year's class of Atlantic salmon, approximately 55,000 in all, was released earlier in June and named after Richard Zink of Drummond Island and Redford Township, Mich. Zink has been a benefactor of the lab for more than 10 years. An avid fisherman, Zink trolls for salmon off Drummond Island and keeps tabs on LSSU fish projects.

"This is the only place that I know of where you can donate money directly to a

program that puts fish in the Great Lakes," the retired accountant said when he visited the lab to assist with the release of the Zink Class.

Zink has been fishing for salmon near Drummond since 1984. When LSSU began to stock Atlantic salmon, he took a particular interest in them and has caught approximately three dozen of the feisty fish over the years. He relays all information about the Atlantics he catches to the LSSU lab.

When this year's Atlantics were released, Zink was present, accompanied by Blaine Tischer, owner of Ft. Drummond Marine and Resort and member of the Drummond Island Sportsmen's Club. The lab presented Zink with a plaque in recognition of his contributions over the years.

Atlantic salmon stocked in 2001, the majority of which will be returning to spawn this year and will be showing up in the creels of fishermen, are missing the left pectoral fin. Fish stocked in 2002 are missing the left vent fin.

Although many of the fish stocked this summer will be of legal size, the lab staff always encourages anglers to release young fish and keep only mature fish of 15 inches



Photo by John Shibley, LSSU

**ZINK CLASS LEAVES SCHOOL — Richard Zink, left, and Blaine Tischer, both of Drummond Island, use brooms to convince young Atlantic salmon to follow the rest of their school down the drain and into the St. Mary's River. LSSU's Aquatic Research Laboratory released nearly 55,000 Atlantics in June. This year's class is named after Zink, in recognition for his support of the lab and its activities.**

or larger. And as it has in previous years, the aquatic lab is looking for information on any Atlantic salmon caught anywhere in the Great Lakes.

"We need information from all Atlantics caught," said Roger Greil, manager of the LSSU lab. "Salmon without fin clips may have been produced through natural repro-

duction, so we have a great interest in determining if that is the case."

Greil said fishermen can send information through the mail, but he encouraged anglers who catch fish nearby to bring in their fish for examination.

"Ideally, we'd love to have Sault area fishermen bring the Atlantic in so we can make a positive I.D., and take the head, along with the dorsal fin and scale samples for stu-

dents' research projects," Greil said.

The lab is open from 8 a.m. to 4:30 p.m. every day, including weekends.

The LSSU Aquatic Research Laboratory is located in the Edison Sault Electric Company power plant. Mail should be addressed to: Lake Superior State University, Aquatic Research Laboratory, Sault Ste. Marie MI 49783.

For more information, call Greil, 906-635-1949.

## FINAL CLEANUP PLAN OF FOX RIVER LIKELY OUT THIS MONTH

GREEN BAY, Wis. (AP) — The final cleanup plan for the polluted Fox River will likely be released by mid-July, a state official said.

Coordinated by the Department of Natural Resources and the regional branch of the U.S. Environmental Protection Agency, the document will provide a general framework for the \$309 million cleanup

### MOSQUITOFISH WON'T FIGHT WEST NILE, EXPERTS SAY

HARRISON TOWNSHIP, Mich. (AP) — A state biologist says people should not plant mosquitofish in ponds and streams to fight mosquitos that carry the deadly West Nile virus.

Fish biologists began to study the fish in December to see if the guppy-sized creature could eat enough mosquito larvae without threatening the food chain for native fish.

The 2-inch fish have been planted in other states and countries for mosquito control. But researchers at the Michigan Department of

project.

The goal is to remove from the area the polychlorinated biphenyls — best known as PCBs, which are carcinogenic compounds — that were released by seven paper companies into the Fox River between 1954 and 1971. The now-banned chemicals were linked to reproductive and developmental problems in people, fish and other wildlife.

Natural Resources office in Macomb County's Harrison Township near Mount Clemens said the fish would not be effective in Michigan. The fish are native to the South.

"There's no reason to plant them here," DNR supervisor Robert Haas told The Detroit News for a recent story. "There's too much of a risk that they could escape into public waters."

No human cases have been reported so far this year in Michigan, but two birds have been found with the disease.

The plan was due in June, but it will more likely be released by early to mid-July, said Ed Lynch, the state's Superfund project manager and the Department of Natural Resources' point man on the cleanup.

The document is about 95 percent finished, said Greg Hill, the chief of the DNR's water-quality modeling section.

It covers the 13-mile area from Little Rapids to De Pere, De Pere to Green Bay and the bay itself. Plans for the southern sections were released in January.

"Generally, what we have (in the document) is the cleanup standards, a description of the work that needs to be done and kind of the basis for it," said Jim Hahnenberg, the key EPA person on the project.

The plan proposes capping, or covering, some of the contaminated areas, and dredging, or scooping out contaminated sediment, in other areas.

## Government may take aim at fish-devouring cormorants

DETROIT (AP) — The double-crested cormorant may lose the federal protection it has had since the 1970s, when pesticides and humans threatened the waterfowl's existence.

The hook-billed, diving birds related to pelicans are plentiful today. But to angler Tom Hedblom, it's an ecological success story that has backfired.

Besides eating about a pound of fish a day, cormorants drive out other nesting birds such as terns and plovers. And their acidic droppings destroy vegetation around lakes, rivers and ponds.

"The reason for the lack of fish definitely is the cormorant," said Hedblom, of Sterling Heights, a retired Detroit police officer who now teaches middle school English in Detroit. "When I was in the Upper Peninsula near Hessel last year with a friend, John

Brody, there were thousands of those birds," Hedblom told The Detroit News recently "There were tons of them. But there were no perch. You could see clear to the bottom, and there were no fish."

In the 1970s, surveys noted just 89 nesting pairs of cormorants throughout North America; surveys now estimate 115,000 nesting pairs in the Great Lakes region alone.

The U.S. Fish and Wildlife Service in March proposed lifting some federal protections, meaning Michigan and 23 other states may be able to kill cormorants in areas where the birds damage fish and vegetation. The agency is reviewing 10,000 comments received from the public since then. It will decide by mid-August on what measures will be employed in controlling cormorants' numbers, a spokesman said.

# THE GOOD NEWS AND BAD NEWS ABOUT CHRONIC WASTING DISEASE FROM GLIFWC

ODANAH — The Great Lakes Indian Fish & Wildlife Commission (GLIFWC) submitted 317 deer heads from the ceded territories in Wisconsin to be tested for chronic wasting disease (CWD) last fall. All those tested are negative for CWD, according to Dr. Jonathan Gilbert, GLIFWC Wildlife Section leader.

In fact, the ongoing statewide testing has not yet found any deer positive for CWD outside of the core area where the disease was first noted, he said. This is good news and may indicate that this is just an isolated outbreak of CWD in the state.

GLIFWC plans to continue testing deer taken by tribal members in the

ceded territories and will be collecting samples this fall.

The bad news is that CWD remains a serious issue in regard to the ongoing health of the deer herd, and wildlife managers must continue to take precautions.

Gilbert regards cervid (deer, elk) farms to be high risk sites for CWD. The high-density population of animals on these farms increases the risk of spreading contagious diseases such as CWD or Bovine TB. Deer and elk are also imported from other areas, bringing with them diseases, which are then introduced into the region.

While the Wisconsin Department of Natural Resources and the Wisconsin

Department of Agriculture have developed screening for animals at deer farms, Gilbert doesn't view the screening as a "sure thing."

"About 20 percent of screened animals may be carrying the disease and go undetected," he said. "And that's too much risk."

Gilbert expects that some prohibitions on baiting and feeding deer may go back into effect this fall. Bans on baiting and feeding have been lifted. He believes the state legislature may consider a compromise bill that will ban baiting and feeding in some areas and allow it in others. This remains to be seen.

Gilbert recently returned from a

national conference on CWD in Madison. Of note are plans to develop a national CWD database to be placed on a website.

The database will list all cervids tested for CWD nationally with test results as well as biological information on the animals, the testing site, who tested them, and where the animals came from.

With access to the database, people interested in knowing the number of positive cases within a certain region will be able to readily obtain answers. The database will be available next spring.

For more information, contact Jonathan Gilbert at 715-682-6619.

## Invasive species costing Michigan millions

By DEE-ANN DURBIN  
Associated Press Writer

WASHINGTON (AP) —

Warning that foreign species are costing the country millions of dollars and hundreds of acres of habitat each year, the National Audubon Society recently pressed for the passage of bills that would dedicate more money to the issue.

U.S. Rep. Vernon Ehlers, R-Mich., and U.S. Sen. Carl Levin, D-Mich., are sponsoring bills in the House and Senate that would spend more than \$160 million annually to study invasive species and fig-

ure out ways to prevent them from arriving in the first place.

Ehlers said recently that his bill has passed the House Science Committee but is waiting to be heard by three other committees, including the critical House Resources Committee. The Senate Environment and Public Works Committee considered Levin's bill mid-June.

"These are non-human terrorists who are going to cause great problems for our country," Ehlers said.

Ehlers said the zebra mussel, which was most likely car-

ried to the Great Lakes in the ballast water of a trans-Atlantic ship, has cost Michigan's economy \$1 billion over the last decade. The mussel multiplies quickly and clogs pipes and waterways.

"Not only is it bad for the environment, but it's bad for our economy," Ehlers said.

Bob Perciasepe, a Washington-based lobbyist with the National Audubon Society, said invasive species are costing the United States \$130 billion each year. Foreign species such as the brown tree snake and fire ants are one of

the primary threats to the nation's birds. In Texas, he said, 55,000 acres of habitat — home to 400 species of birds — have been wiped out by a tree called the Chinese tallow.

Ehlers and U.S. Rep. Brian Baird, D-Wash., said despite the extent of the damage from invasive species, many people — including fellow members of Congress — are unaware of the problem.

"This is not an issue that polls highly," said Baird, who is co-sponsoring Ehlers' bill.

Baird said Spartina grass, which made its way to the

West Coast from Maryland, is clogging tidal areas and threatening Washington's oyster and salmon industries. The grass also hurts birds, who use the tidal areas as stopovers during migrations.

Baird estimated that damage from invasive species could eventually outweigh damage from pollutants, which has historically gotten far more attention.

"You can have the entire ecosystem changed by one invasive species," Baird said.

## Invasive fish on the move

MORRIS, Ill. (AP) — Two types of invasive fish have been found in the Illinois River, a federal official said.

A round goby was caught last month in the Illinois River above the Dresden Island Lock and Dam east of Morris, said Gary Czapinski, a biologist with the U.S. Fish & Wildlife Service. The Asian carp has traveled as far upstream from the Mississippi River as Joliet.

"You've got round gobies coming this way toward the Mississippi and Asian carp going that way toward Lake Michigan, and they're all meeting in Morris, or almost," Czapinski said.

Invasive fish concern biologists because often they are free of natural predators and compete with native fish for space, food and spawning sites, said Pam Thiel, project leader for USFWS's Fishery Resource Office in La Crosse, Wis. There are four species of Asian carp — the bighead, silver, grass and black carp. They are prolific and eat large quantities of vegetation and plankton, Thiel said.

"They consume so much of their total body weight per day, like 40 percent," said USFWS biologist Burr Fisher. "The worst case scenario is that the other fish will then die out, and this will be all we have left."

Round gobies also reproduce quickly, spawning 300 to 500 eggs every 20 days.

The federal government monitors the Illinois River every year to check for new species, Czapinski said. But scientists can't do anything about the fish that already are in the river. They can only try to educate the public on preventing the fish's spread, Czapinski said.

"It's really hard to eradicate or eliminate round gobies and Asian carp because you can't treat them with chemicals, as this will adversely affect the other fish species," said Elizabeth McCloskey, a biologist with the northern Indiana division of USFWS.

An experimental electrical barrier installed last year by USFWS in the Chicago Sanitary and Ship Canal near Romeoville might have been installed after the gobies were beyond that point, McCloskey said.

"They are hoping the barrier will keep the Asian carp out, but they don't know that for sure," she said. "The gobies are already past it, and we're just hoping now it won't be the huge population of them that they have upstream, that the Asian carp will get to the barrier and turn around instead of keeping on coming."

## Detroit going to the bats?

WARREN, Mich. (AP) — A City Council member wants to enlist mosquito-gobbling bats in this Detroit suburb's battle against West Nile virus. Warren officials will consider Councilman Jim Fouts' proposal to install bat houses in parks and other areas of the city.

"I think using nature against nature is a better way to get rid of pests than sprays or (larvicide) pellets," Fouts told The Macomb Daily of Mount Clemens for a recent story.

"I don't think we can afford to wait another year if possibly it can save some lives. Even if you don't save some lives — which I think it would — at least it could make life more tolerable for people who like to enjoy activities outdoors."

One bat can consume between 6,000 and 8,000 insects every night; mosquitoes can comprise up to 30 percent of that diet, said Rob Mies, director of the Organization for Bat Conservation. "They are the primary predators of nighttime insects," said Mies, whose organization is based at the Cranbrook Institute of Science in Bloomfield Hills. "They help control garden pests like moths and beetles."

Bat houses are made of wood and can hold a colony of up to 100 bats.

Fouts suggests that Warren buy enough bat houses to place two of them in every square mile in the city, and one in each city park. He also wants the city to ask DTE Energy to install bat houses along its property easement, where nearby residents have long complained that standing water and high grass have created a mosquito breeding ground.

Michigan has had no reported cases of West Nile virus in humans so far this year. In 2002, Michigan had the second-highest number of people infected with West Nile.

A Warren committee studying ways to fight the spread of West Nile will soon begin discussing Fouts' bat house proposal. But one city official questioned its effectiveness.

"I don't think there's enough bats in this urban area to be attracted," said Joe Rivas, head of the city's Service Division.

In the meantime, the city has dropped mosquito larvae-killing chemicals into about half of its catch basins.

Five bat houses were installed last summer in city parks in South Lyon. Six houses built by Boy Scouts were installed in June in four parks in Ferndale.

# From CORA meetings, page 2

Huron whitefish contaminants have declined from 1996 to 1999, testing at either unrestricted or one meal per week even for women and children. Ripley said that is very significant. He added that a few years ago, we would never have seen this.

The good news will not be reflected in the state advisory because the state tests only skin-on fillets, which contain three times as much contaminants. Plus, the state factors in historical levels. Although still well under trigger levels, mercury has increased slightly, which may reflect increased use of coal fired power plants in the Midwest, said Ripley.

Ripley then reported on the Stage 2 Remedial Action Plan (RAP) recently released by the U.S. and Canada. Areas of Concern (AOCs) include pollution, sewer discharges, and habitat degradation. Ripley represents CORA on the Binational Public Advisory Council for the RAP and the statewide Public Advisory Council.

A Lake Michigan Aquatic Nuisance Species Committee has formed, initiated by Ripley. Lake Michigan has more exotics than the other lakes. Plus, they want to keep Asian Carp out and prevent any new introductions. They are hoping to have more say, Ripley added.

Archie Martell for Little River Band reported getting ready for spring assessments.

Erik Olsen, GTB biologist, had to leave early. GTB attorney Bill Rastetter said Grand Traverse modified its planned assessment in WFM-06 and won't need a permit for the scaled back version.

Bay Mills Conservation Officer Ben Carrick had recently been elected chairman of the Law Enforcement Committee, a standing committee under the Consent Decree. He reported an extra meeting to get the mandated forms and patrols together. The committee is requesting an addition to CORA regulations, said Carrick. Persons on tribal fishing boats with no licenses should sign a form before boarding. Non members or non licensed persons might be a reporter or other observer, added Parker.

The amendment to fishery regulations would add a subsection to Part 6, licenses and information, requiring that any non-licensed person on the water in a vessel of a licensed tribal commercial fisher must have a written form from that fisher.

A CORA form will be developed for subsistence fishers. New language will come back to the June meeting.

CORA Resource Developer Bucko Teeple gave an update on access sites. He reported access to McKay Bay by end of May. He is getting a dredging estimate; a permit is required beyond 300 cubic yards, and will take some time. There is still a problem with the number of boats at Whitefish Point Harbor. He is still looking for alternatives. Little Lake Harbor is filling up with sand; he didn't see the wall falling in. He said Rockport would be inspected before the fishing year.

He also put together a self-running

power point presentation about CORA and what it does. He is working on the next Protectors of the Earth Camp. The market price of whitefish still needs to be raised, he said.

Gorenflo reported next. He said that the MH-1 2003 harvest limit up a lot from a new 2002 penalty. He added that the state exceeded in two places and had penalties, too.

He reported that the Manistique River is generating a lot of lamprey and that the wounding rate is rising. Gorenflo said the state needs to fix it now, not in the nick of time. The Consent Decree is not being met, he added.

Gorenflo said the Great Lakes Fishery Commission will treat the river again, as it did last year. The dam needs to be fixed — in the meantime, a lot of lake trout will die.

Gorenflo asked each tribe to help get the commercial catch reports in on time. The reports must be compared to wholesale figures, and they have to match. If not, the fishers must be called. Gorenflo also needs the wholesale report from the state.

For the 2003 total allowable catch (TAC), the state won't agree on tribal lake trout harvest limits unless dead discards are counted. MH-1 is a hot spot, Gorenflo said. It had a reported harvest total of 109,000 pounds, plus the dead. that's 23,000 over.

Menominee said Bay Mills is not happy with last minute scares to close down the fishery. Of the 109,000 pounds, 11,700 were caught by Bay Mills, 12,000 by GTB, and the rest by Sault Tribe. He suggested continuing the bag limit. Paquin said it was obvious one fisher is catching a lot of lake trout. Sault Tribe will deal with it, he said. One fisher can't jeopardize the fishery for everyone else, he added.

In MI-6 at Munising, Gorenflo reported that the state is having problems with its TAC. The harvest limit is too low. Gorenflo said the Consent Decree specifies using the model, but the model doesn't work well in lightly exploited fish stocks.

A concern was raised about an excess number of nets being fished in WFM-04 (Beaver Island area), where trap net operations are limited to 12 nets in the water at any one time per fisher. Paquin will look into it.

Little River Band proposed a change to the CORA regulations to include bow and arrow under gear. Martell said the state regs allow bow and arrow. A motion to approve the addition passed.

Paquin was concerned that the new gear could cause problems in some subsistence areas. There have already been five complaints from the state. Attorney Kathryn Tierney said the new language has to go to the state anyway; the state has 30 days to object.

The board also approved that the Biological Services Division (BSD) would meet and elect a chair. A BSD report would be added to the agenda.

The board also approved that the bag limit set last year would remain in effect for the 2003 season.

## CORA June 20

The June 20 CORA meeting was held in the Williamsburg Annex of the Grand Traverse Band of Ottawa and Chippewa Indians. Bay Mills Executive Council Secretary Terry Carrick sat in for Bay Mills Chairman L. John Lufkins. George Bennett sat in for Grand Traverse Band Natural Resources Commission Chairman John Concannon. All other regular members were present. The meeting was chaired by Sault Tribe Chief of Police and Unit 3 Director Fred Paquin, vice chair of CORA, in Lufkins absence.

Assistant United States Attorney Hagen Frank was introduced to the board by Assistant United States Attorney Jeff Davis of the Western District. Frank became a federal prosecutor after 20 years with the U. S. Marines. Frank described the anti-terrorism efforts of the Department of Justice. He said local, state and federal governments are going full speed at the problem but there has been no coordination, therefore tribes have not been left out.

He said that U.S. Attorney Anti-Terrorist Task Forces have been formed but have been given no guidance. All districts differ and therefore have different needs. He said the U.S. Attorneys Office is working to formalize the task force structure — in information gathering mode figuring out the playing field. He said that Davis will distribute information from the Western Districts to the tribes. They are not just thinking about federal, state and local governments, he said, they are thinking about the tribal organizations, too. He also told the board that there is no big pot of money, so far. Lots of federal agencies are wondering what effect Homeland Security will have; tribes will be part of the process.

Public Information Officer Jennifer Dale gave an information and education report. The board approved her annual salmon net safety draft materials. Little Traverse Bay Bands Natural Resources Commissioner John Keshick asked that she send out trap net information for the Beaver Island and Garden Island areas, too. She said she had pre-approved materials for that area that were used the first season after the 2000 Consent Decree was signed.

She said a letter had been sent out to Natural Resource entities to furnish her program with names of fishers interested in a retail listing, and offered an example of the kind of publication she had in mind. She said that Mike Ripley would later report on a possible funding source for this kind of brochure.

She also reported that since no one had input on the website update she would proceed with the executive director's final approval.

Lastly, she reported that the Great Lakes Fishery Trust (GLFT) fishery education conference was productive, very helpful in establishing many new contacts, and that she received positive feedback from her panel discus-

sion. Bucko Teeple (CORA) and Doug Craven (LTBB) also attended.

CORA Executive Director Jeff Parker reported working with Michigan State University on a public awareness campaign to promote the 1836 Treaty fishery as the fish of choice. He said that there is a need for an expanded, full-time information and education program, or public awareness program. He said the program needs more funding and more hours.

In other marketing concerns, Parker is working on packaging to help fishers get more for their fish. He gave the example of depressed fresh fish prices in the winter because frozen fish from the fall was on the winter market. He said that HAACP training will be required. Bay Mills Community College has some limited training available. Ron Kinninen, who is a certified master trainer, could offer the full training with a class of at least 20. The class could be scheduled at a time convenient for fishers. Some of the cost could be covered, and Parker would need numbers from each tribe. The board agreed that Parker could set up a training.

Parker reported a \$6,000 shortfall to fund contaminant testing this year. The board approved moving carryover funds to pay for the shortfall.

Parker then updated the board on a meeting with the Coast Guard in which a memorandum for a class exemption for certain class commercial fishing vessels was obtained from the USCG. Parker said it was "the best we could get." To be eligible, vessels under 26 feet that operate less than three miles from land are exempted from carrying immersion suits if they meet all of the following requirements and carry a copy of the memo on board:

- Operate from the time period of approximately 2 hours before sunrise to not later than sunset, and

- Have on board an operable cell phone or VHF FM radio, and

- As an equivalent to an immersion suit, all tribal commercial fishermen will wear either a Coast Guard approved Type I PFD or a Coast Guard approved inflatable PFD, and

- Operate in close proximity with other fishing vessels, and

- Have passed a dockside exam and have on board all other required equipment.

Parker said he would get copies of the memo to each tribe to disseminate to its fishers. Craven said Little Traverse could go over the requirements at an upcoming safety meeting. He also said he found USCG approved inflatable PFDs from Mustang Survival Company for \$94 at GSA prices. The inflatable PFDs lie flat against the body until in use.

In other matters with the Coast Guard, the USCG-CORA MOU provides for USCG decals for inspected fishing boats. According to Parker, the USCG said the forms tribes use to get the

*See "More Meeting Briefs," pg 7*

## More meeting briefs, page 6

decals are not completed accurately. He said it would be a good idea to set up a meeting with the Sault-based Lt. Locklear and tribal conservation officers so everyone has an understanding.

Craven added that Little Traverse is not a signatory to the original MOU with the Coast Guard, and is in the process of developing an MOU; they can try to incorporate the decals into that MOU.

Parker said according to the MOU, any violations go to tribal court. A tribal prosecutors list would be helpful for Parker so the USCG knows who to contact at each tribe.

Paquin said they would verify the procedure with the Coast Guard. He thought it went from USCG to tribal law enforcement to tribal court.

Little River Attorney Bill Brooks brought up the need for a CORA lobbyist separate from any of the tribes' lobbyists and interests. Parker said a lobbyist would cost \$30- to \$35,000 per year. It would free up some funds if each tribe would commit about \$7,500 apiece toward a lobbyist to ensure recurring funds for the new tribes and increase funding levels for all the CORA tribes or at least make sure there aren't cuts.

The lobbyist would do things like educate Congress about CORA and Consent Decree mandates. Parker has someone in mind and will call for a phone vote the next week.

The next meeting will be hosted by Little Traverse Bay Bands Aug. 21.

### GLRC June 20

The Great Lakes Resource Committee met following the CORA meeting chaired by Sault Tribe Conservation Committee Chairman Vic Matson Sr.

In Conservation Committee Reports, John Koon for Little River Band reported in-house matters plus discussion on passengers on commercial fishing vessels. Dave Menominee for Bay Mills reported in-house matters plus the Whitefish Point access. Bay Mills would like to meet with Sault Tribe about vessels there that may not be active vessels. Matson and Menominee will set up a meeting.

John Keshick Jr. for Little Traverse said four trap nets were approved for its exclusive zone. Grand Traverse reported discussing local access sites, regulations and the impact of the agreement with the state of Michigan.

Matson for Sault Tribe reported in house matters plus MM-1 concerns on the lake

trout bag limit. If they can't fill the TAC, said Matson, the TAC could be lowered. The TAC is 435,000 pounds and they only catch 217,000 pounds. That's the worry, said Matson, offering the matter as food for thought with the suggestion of raising the bag limit.

Grand Traverse Band Fishery Biologist Erik Olsen talked a little about the "numbers game" in lake trout stocking efforts, and the differences in survival strategies for Lakes Michigan and Huron.

In Biologists Reports, Olsen reported finishing an assessment in M-712 and M-713 (0-51 foot depth to ascertain bycatch). He reported assisting a fry predator study and working on sea lamprey traps.

Steve Lanart for Little Traverse Bay Bands reported conducting spring surveys, a yellow perch assessment, and finishing a cooperative grant. Attorney Kathryn Tierney congratulated him on his election to the Biological Services Division (BSD) chair.

Bay Mills reported a new biologist coming on board July 7.

LRB Natural Resources Director Bob Hardenburgh Little River reported two assessments complete; 101 sturgeon larvae were captured for a study.

Under ITFAP's report, Environmental Coordinator Mike Ripley reported he was asked to participate in an effort to develop a Lake Huron LaMP. This work ties in to ITFAP work with the St. Marys River RAP, the Lake Huron Lake Committee and Technical Committee.

Ripley reported on preliminary results of the Ojibwe Health Study conducted by John Dellinger, who also attended the meeting. Members of GTB and Bay Mills participated in the study. The tribes are lumped together geographically so that, for example, GTB and Bay Mills are in one area. Participants tested below average levels; very few were over for PCBs or mercury. Levels were quite low, surprisingly, considering the amount of fish reported being eaten, said Ripley. Results show that messages to avoid eating fish are not right.

Ripley reported that a large grant is available for outreach to U.P. residents. Inter-Tribal Council of Michigan, ITFAP and the CORA Public Information Officer would be involved. The grant emphasis is on tribal communities. This is the grant that could help fund a brochure about fish. Dellinger said the ITC and

ITFAP have a very strong likelihood of getting a grant.

Conservation Officer Ben Carrick reported for the Law Enforcement Committee. He said the committee had met the week before, straightened out a problem the Michigan DNR had with Whitefish Point and talked with a Coast Guard representative. The committee decided to invite the Coast Guard to future meetings. He reported current joint patrols at Bay de Noc. The committee decided to set up a subcommittee to look at trap net enforcement.

CORA Resource Developer Bucko Teeple reported on access sites. McKay Bay was completed with Great Lakes Fishery Trust funds at the end of May. There were 900 additional cubic yards dredged.

Teeple inspected Rockport with the MDNR. Because of erosion, the northeast side — used for loading and unloading — needs cap stone, filter cloth, smaller stones and then gravel. The DNR agreed and work should get started in the next couple of weeks.

The water is low at Hammond. Fishers have had to use the main pier for loading and offloading, so it is a long walk to the parking lot with the fish boxes. A hand cart for their use would help.

Teeple said he asked Tom Paquin (MDNR) to study the possibility of extending the Hammond Bay bulkhead to the beachwalk and dredging.

Teeple met with the state about the possibility of enlarging the Whitefish Point Harbor. Six years ago, the MDNR had such a plan that was later abandoned. Teeple modified the plan into a proposal for a tribal pier with eight slips and applied to the GLFT. The DNR found the idea interesting, said

Teeple.

Teeple also reported dredging at Little Lake Harbor. Teeple met with the DNR to propose redoing the launch ramp, and repairing or replacing the skid pier. He recommended \$5,000 from the access line item to repair it; the skid pier is important to small boat fishermen. The GLRC approved the project in conjunction with the DNR.

Lastly, Teeple said the Protectors of the Earth Youth Camp needs a little more funding but could hold a bare bones camp right now.

Steve Lanart reporting for the BSD, said it met and discussed whitefish surveys needed in addition to existing surveys by tribal biologists.

GLRC passed new language requiring a permit for non members or non licensed persons aboard a tribal fishing vessel. GLRC agreed to Craven's request to add "purpose to be on board" to the permit form. Violation would be the same as having a non-licensed fisher or non member on board, excluding tribal biologists, who already have authority to be on board.

LRB Natural Resources Commissioner John Koon added that CORA could draw up a permit for tribal use.

CORA Executive Director Jeff Parker said CORA has been using up old COTFMA boat registration stickers. He would like a new system because so many boats are being boarded by Border Patrol or USCG. That can be alleviated with a registration system that uses numbers and lists. He needs a resolution from each tribe giving CORA the authority to develop a system to bring back for approval. The registrations would be for commercial and tribal government ves-

sels only.

Fred Paquin, Sault Tribe, brought up trap net regulations and markings. He said law enforcement found 12 abandoned trap nets in six areas. They have no idea of the owners of the nets. Pulling abandoned trap nets are a major cost.

Some fishers leave nets in the water in November, hoping to start again in December. Paquin said law enforcement wants the nets out by a certain time.

The state requires a plastic tag or ring on the post of their trap nets, which it would supply to the tribes. Paquin proposed marking tribal trap nets with the tags, and that the nets be pulled in November. He will submit something later and send it around to all the CORA tribes.

GTB Attorney Bill Rastetter said nets get iced in, too. He said GTB has a set of regulations already done for GTB. Tierney said she thought there would be notification of any regulations changes. He apologized and said they were going to do that.

Matson said he retired from fishing and his license has been transferred to another fisher. That fisher wants approval for a one-year, non-member consultant to teach him how to use trap net gear. A motion to approve passed with Dave Menominee dissenting.

A phone vote for reaffirmation for another such consultant for Grand Traverse Band passed with Menominee dissenting and Terry Carrick abstaining.

The body recognized both LRB Chairman Johnny Sams and Little Traverse Bay Bands Chairman Gerry Chingwa for their time on the CORA board. Both chairmen's seats are up for reelection.

## REMINDER TO GILL NETTERS, TRAP NETTERS: \$100 REWARD FOR TAGGED FISH

The Hammond Bay Biological Center (HBBC), in cooperation with tribal, federal, state and provincial agencies, is conducting a tagged fish study.

Tribal fishers are encouraged to not throw back any lake trout that is a tagged fish. Fish containing internal recorders can be kept to be

turned over to HBBC for a \$100 reward. Please note the date, time, and location of the catch. Fishers are encouraged to call to make arrangements for pick up and their reward for turning in the tagged fish.

Call 989-734-4768 Monday-Friday 7-4:30, or 989-733-8337 at other times.

## ITFAP participates in Grand Traverse Band's Earth Day Fair

Patty O'Donnell, environmental stewardship director for the Grand Traverse Band of Ottawa and Chippewa Indians, held an Earth Day Fair at the GTB office in Traverse City. The fair was a day of gathering together and learning about earth friendly services, design, and products. Tribal fisheries was represented by Mike Ripley of Inter-Tribal Fisheries and Assessment Program, who manned a booth offering information about the fisheries in the 1836 Treaty waters as well as fish nutrition.

Other participants offered information, materials, products, and gifts highlighting energy efficiency, energy alternatives, recycled materials and products, environmentally friendly materials and products, traditional foods for your health, sustainable development, organic foods, and natural landscaping.

At right, ITFAP Environmental Coordinator Mike Ripley and GTB Environmental Stewardship Director Patty O'Donnell at Grand Traverse Band's Earth Day Fair in Traverse City.



## Study suggests that amino acid present in fish, oranges helps offset blood vessel damage

Eating fish and oranges may help offset some of the blood vessel damage caused by smoking, a study suggests. Irish researchers have found that a single portion of fish could be enough to stop arteries from hardening. They tested the effects of taurine, an amino acid found in fish, on 15 smokers. Taurine is present in all types of fish. But by eating fish such as trout and whitefish, yet more benefits are reaped by the high omega-3 fatty acid content.

Here is a very quick recipe with fresh fish and orange juice. Use your favorite fillet.\*

### Fish fillets with orange sauce

1.5 pounds fish fillets  
2 TBS fresh orange juice  
2 TBS dry white wine (optional)

2 TBS melted butter  
salt and pepper

1/2 tsp grated orange zest

Grate orange zest and juice the orange. Blend orange juice and wine with melted butter to make sauce. Spray rack of broiler pan with non-stick cooking spray. Place fish on rack in broiler pan. Pour half the sauce over the fish fillets. Sprinkle with salt, pepper and orange zest. Broil 4 inches from heat for 2 minutes; pour remaining sauce over fish and continue broiling until fish is done. Fish should flake easily with a fork. Garnish with fresh orange slices and parsley.

\* Be sure to remove all skin and fat. Proper trimming and cooking removes an average of 68 percent of contaminants present in fish, according to MSU researchers.



Above, grilled whitefish with orange sauce is the basis for a tasty meal with steamed green beans and rice pilaf.

See our new brochure at [www.1836cora.org](http://www.1836cora.org)

"Tribal Fishing" is published by the Chippewa Ottawa Resource Authority (CORA) Public Information & Education program. The program is administered by the Bay Mills Indian Community Newspaper Department.

Please direct all inquiries to Jennifer Dale, 12140 W. Lakeshore Dr., Brimley, MI 49715, 906-248-2258, [newspaper@bmic.net](mailto:newspaper@bmic.net).

CORA Executive Director Jeff Parker may be reached at 906-632-0043 or [cora@up.net](mailto:cora@up.net). See the website [www.1836cora.org](http://www.1836cora.org) for more information.

Permission must be obtained to reprint any matter in this newsletter. Submissions and letters welcome at the above address. Please use your full name & address.

## FISH OILS IN HEART CELLS CAN BLOCK DANGEROUS HEART RHYTHMS

From the American Heart Association

DALLAS — Eating oily fish at least twice a week can prevent sudden cardiac death because fatty acids in the fish block dangerous irregular heart rhythms, experts say in a review article in the May 27 issue of *Circulation: Journal of the American Heart Association*.

Epidemiologists have known for years that eating fish was associated with reduced risk of cardiovascular disease, but only recently have researchers had laboratory evidence to explain this effect, says review author Alexander Leaf, M.D., Jackson Professor of Clinical Medicine Emeritus, Harvard Medical School, Boston. Leaf and colleagues present a detailed explanation of how omega-3 (n-3) fish oils benefit the heart.

"Animal experiments show that fatty acids from n-3 fish oils are stored in the cell membranes of heart cells and can prevent sudden cardiac death or fatal arrhythmias," Leaf says.

Arrhythmias are irregular heart rhythms. Leaf says that studies of individual heart cells demonstrated that the omega-3 essential polyunsaturated fatty acids (n-3 PUFAs) specifically block excessive sodium and calcium currents in the heart. Those excessive electrical discharges cause dangerous and erratic changes in heart rhythm.

The first clinical suggestion that n-3 PUFAs significantly benefited the heart came from a 1989 study in which 2,033 men with heart disease were given dietary advice on fat, fiber or fish. After two years the men who were told to eat fish at least twice a week had a 29 percent reduction in death. There was no benefit in either the fiber or fat groups.

Since about "50 percent to 60 percent of deaths in the setting of coronary heart disease are sudden cardiac death [deaths within one hour of symptoms of

a heart attack] attributed to sustained ventricular arrhythmias" the authors write, the reduction in deaths reported in this early study is probably evidence of fewer fatal arrhythmias.

This initial study was followed by a series of observational studies and controlled clinical trials. All arrived at the same conclusion: A diet rich in fatty fish reduced fatal heart attacks. But Leaf says that this "protection" was still not completely understood.

In early animal experiments, researchers demonstrated that animals fed a diet in which 12 percent of the calories came from saturated fat died of sustained ventricular fibrillation, but animals that were also fed n-3 PUFAs did not develop these dangerous arrhythmias when their coronary arteries were tied off.

But then Leaf and other researchers still needed to find out if "there were any plausible biochemical or physiological effects of these n-3 fatty acids which could explain their antiarrhythmic action." To do so, they cultured neonatal heart cells from rats and observed them under the microscope. The cells clump together and the clump beats spontaneously, rhythmically and simultaneously just like the whole heart.

Using a video camera, Leaf and his colleagues taped the action of the cells and the effect of different toxic agents on the cells. They discovered that adding n-3 PUFA prevented arrhythmias induced in the cells.

Leaf and his colleagues conclude that "n-3 fatty acids have been part of the human diet for some 2-4 million years during which our genes were adapting to our environment, including our diets. They are safe and have been listed on the GRAS list ('generally regarded as safe') according to the FDA."

Leaf says that fresh or frozen fish are the best choices but

canned tuna can be used if it is packed in water. "Tuna packed in oil is not a good choice because the extra oil will extract the beneficial n-3 oil from the fish," he says.

According to a recent American Heart Association scientific statement a "dietary approach to increasing omega-3 fatty acid intake is preferable. Still, for patients with coronary artery disease, the dose of omega-3 (about one gram per day) may be greater than what can readily be achieved through diet alone. These individuals, in consultation with their physician, could consider supplements for CHD risk reduction."

The association recommends that individuals with certain cardiovascular conditions consult with their physician about fish oil supplements.

In an accompanying editorial, authors David S. Siscovick, M.D., Rozenn N. Lemaitre, Ph.D., and Dariush Mozaffarian, M.D. say the messages from Leaf and colleagues are clear.

"For clinicians, it is time to implement the current American Heart Association dietary guidelines . . . For policymakers, there is a need to consider a new indication for treatment with low-dose n-3 PUFA supplements — the prevention of sudden cardiac death in patients with a prior [heart attack]. For researchers, there is a need to continue both clinical studies and studies that explore the mechanism through which n-3 PUFAs influence the risk of sudden cardiac death," they write.

The American Heart Association estimates that sudden cardiac death causes 250,000 deaths in the United States each year.

Co-authors are Jing X. Kang, M.D., Ph.D.; Yong-Fu Xiao, M.D., Ph.D.; and George E. Billman, Ph.D. The study was partly funded by the National Institutes of Health and the American Heart Association.