

*For the Seventh Generation*

# PRESERVING THE RESOURCE



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## Grandfather Trees can save Mother Earth

By Jennifer Dale-Burton

"If we don't replant, reforest, and heal the forest and waters, who will?" asked David Milarch, who established the Champion Tree Project with his sons, Jared and Jake. It's been a full decade since the Copemish, Mich., arborist founded the non-profit undertaking to preserve the eldest, largest trees and propagate their genetics. In that decade, the project has grown to international proportions. Milarch clones these champion trees and plans to reforest the world with them, one acre at a time if necessary. They have already accomplished a lot to further this plan.

One evening 14 years ago, he was sitting around the fire with his son when his life's mission came to him. He would preserve the Grandfather trees — these biggest, best, tallest, strongest, and eldest representatives of Earth's largest living plants. And he would reforest Mother Earth with their clones. These are the trees that have survived everything Mother Nature and human civilization have thrown at them.

Milarch feels that there is some inherent "survivability" trait in these trees that helps them withstand the ages. "The average lifespan of a street-planted tree is seven years. Grandfather trees live many times longer than seven years — they've survived everything and they are still around."

Some of these trees are even flourishing under harsh, big-city conditions. These are the trees we should use in urban settings, in every setting, Milarch thinks. "Grandfather trees are 300 to 700 years old," he said. "When you clone that tree — it IS that tree."

And he started doing just that, having no idea that no one else was doing it. It was a concept that resonated across the nation and the world. In a few short years, Milarch was collecting buds and cuttings from the nation's magnificent elder giants from Maine to California, had founded the Champion Tree Project, which went national and then international. Ten years later, he has just returned from Europe and has been asked to China and Japan.

And the projects just keep on coming, and the concept just keeps on spreading. The Champion Tree Project has planted the young clones of the world's mightiest trees at universities, the Lewis and Clark Trail, on corporate campuses, cemeteries, tribal lands, and as memorials to the victims of 9-11. The project has been included in K-12 curriculums; state, national and world sustainability strategies; and is partnered with many

national organizations and over 200 worldwide.

But there is so much work that needs to be done. We have denuded Mother Earth of 98 percent of her old growth forests and we have used far more than our share. Some scientists have estimated that we have already consumed the resources of the next 14 generations. It is still possible to reverse this damage and instead leave a healthy legacy for the seventh generation and beyond and an important part of that effort is reforestation. Milarch knows that by planting today with proven champions — our native birches, beeches, maples and all the rest — we could start reversing the damage and beginning the healing. It's our responsibility to leave the seventh generation with a healthy legacy.

Grand Traverse Band of Ottawa and Chippewa Indians is helping to ensure that legacy with a 2-percent award of \$10,000.

Milarch has propagated some of the oldest trees in the world, including the 4,500-year-old-plus bristlecones of our American West. The oldest of these trees, dubbed "Methuselah," is 4,780 years old — sprouting to life at the dawn of human history.

Milarch would really like to see his young champions utilized on Anishinabe lands, and show us how to reforest Mother with young trees from the Grandfathers. He has worked with tribes across the country and would love to work with the Anishinabe, and all he needs is an invitation, he said.

One project dear to Milarch's heart is a maple sugar grove planted in a medicine wheel design. The young trees from old Grandfathers could teach the children all about maple sugar.

Milarch said there are a number of Champion trees right here in Michigan: a maple tree 7 feet in circumference right in Grand Traverse County, a beech 11 feet in circumference in Onekama, as well as a champion Black Ash, Green Ash and Red Ash, Yellow Birch, American Elm, Norway Maple, Red Maple and Black Willow. Imagine a lilac tree 7 feet across — it lives in St. Ignace.

Milarch says that to repair and renew Mother Earth's weakening ecosystems, we all face four essential tasks: Research, Reforestation, Topsoil Renewal and Youth Education to respect trees, care for forests, and be wiser stewards of Earth's natural communities.

"If we don't replant, reforest, and heal the forest and water, who will?" asks Milarch.

"Our Mother needs our help."



Photo by Jennifer Dale-Burton/CORA

Fishers at the HACCP training last December, (clockwise from top) Lewis Keller, Mitch Soulier, Pat Peterson, Gil Peterson, (clockwork from top), work in a group to develop their own seafood safety plan.

## CORA sponsors '06 HACCP training; 30 get certified

BAY MILLS — Congratulations to Mat Stone, Patricia and Floyd Paquin Jr., Lavern Alexander, Tionnelle Brasseur, Donald Houghton, Lewis Keller, Joel Kimball, Dave King, Joseph Marsh and Charles Matson as the most recent graduates of the AFDO/Seafood Alliance HACCP Training Course. The CORA-sponsored fishers were joined by 19 others from across the country.

The intensive 3-day course was taught by Mike Erdman, Ron Kinnunen and James Thannum, with help from CORA Public Information Officer Jennifer Dale-Burton, who is also HACCP-certified. Bay Mills Community College loaned its state-of-the-art Mikanuk Hall for the course, while the campus was on Christmas break.

Over the years, Instructors Ron Kinnunen, Mike Erdman and Jim

Thannum have developed a Great Lakes-tailored HACCP course that they could teach in their sleep. The trio has also gathered regional resources of great use to our fishers and processors, such as educational presentations, videos, booklets, manuals and even marketing tips.

This year they invited Dale-Burton to present two chapters of the course, and to talk about food safety issues as a pow wow vendor. Selling fish food products — such as fried fish and fish boils — is something that more fishermen are considering. At the same time, tribal sanitarians are beginning to look at pow wow food safety. The information packets Dale-Burton distributed, which illustrates a slightly different approach to HACCP, can help in a variety of situations.

See "HACCP 2006," page 3



Photo by Jennifer Dale-Burton/CORA

HACCP participants (L-R) Troy & Brenda Hanson, Charles Matson, Patricia Paquin and Dave King get some help from HACCP Instructor Ron Kinnunen (standing).

# Native Fishes of the Great Lakes: Deepwater Ciscoes

Before the Great Lakes were affected by settlement, they were dominated by lake trout, ciscoes, and sculpins. By the 1950s, Lakes Erie and Ontario were nearly devoid of these fishes, severely depleted in lakes Michigan and Huron, and remain rare in these lakes today. Only Lake Superior's deepwater fishes are still intact.

Ciscoes eat plankton, insects, fish eggs and sometimes minnows. They once served as an important forage fish for predatory species such as lake trout, rainbow trout, northern pike, burbot, yellow perch, and walleye, until they declined in Great Lakes due to tremendous fishing pressure, competition from introduced species like smelt and alewife, and pollution. With the recent decline of these introduced species and more research and insight into Great Lakes native food webs, the kiyi, shortjaw, and bloater ciscoes are all being considered for reintroduction to the Great Lakes. Lake herring, recently renamed as a cisco, is also being considered for reintroduction to the Great Lakes.

Ciscoes are the smaller cousins of lake whitefish (*Coregonus clupeaformis*) and all belong to the *Coregonus* family of fish. Scientists consider ciscoes as still undergoing "speciation," that is, forming new species suitable to environmental conditions. Scientists think this "plasticity" may be beneficial in trying to fill niches of extinct ciscoes and they look forward to a lot more research in this area.

The lake herring — *Coregonus artedii* — is an interesting fish. In the 19th and early 20th centuries, lake herring provided some of the largest commercial catches from the Great Lakes and, when salted down or smoked for preservation, provisioned much of the developing country. Lake herring were also valued for their roe.

*Coregonus artedii* is now rare except in



**Coregonus artedii, the lake herring, belongs to the family of ciscoes on the Great Lakes.**

Lake Superior, where it is still considered a sport and commercial fish. It has a shallow-water form, and a deep-water form commonly known to fishers as a "chub." Lake herring is typically 11 to 15 inches and weighs from 6 ounces to 2 pounds. Occasionally, some grow as large as 5 pounds. It is a silvery-colored fish with pink to purple iridescence on its sides. Lake herring has held on in Lake Superior and the St. Marys River, and is now making a comeback in Lake Huron and Lake Michigan's lower Green Bay. With less competition due to the decline of alewife and smelt, the Lake Herring in Superior are even thriving in western Lake Superior, especially where Minnesota is stocking them near the Apostle Islands.

As with all fresh fish, those who catch a lake herring should fillet it before preparation eating in order to reduce the amount of contaminants that may be in the fat layer. Great Lakes' lake herring has one of the lowest mercury levels found in fish, and is one of the very highest in omega-3 fatty acids — 3.5 to 3.6 grams per 3-ounce serving.

(Sources: *Reintroduction of Native Fishes to the Great Lakes Proper: A Research Theme Area*, Great Lakes Fishery Commission Board of Technical Experts April 3, 2002; *Wisconsin SeaGrant*; *Michigan DNR*; *International Association for Great Lakes Research*; *Fisheries Assessment Biologist Mark Ebener*)

## Savory Lake Herring Puffs

Lake herring is often smoked. Here is a recipe for smoked herring filling a puff pastry you can make at home. Lake herring may also take the place of whitefish in recipes, but fillet carefully as it is a slightly bonier fish.

— J. Dale-Burton, Ed.



**LOOKS GOURMET, TASTES GOURMET** — Egg puff pastries are easy to make and fill with homemade fish spread, also easy to make. To make savory puffs, grate in cheese, herbs or even mushrooms.

### Savory Fish Puffs

#### Filling:

1/2 lb. smoked Cisco, skinned, boned and flaked  
8 oz. softened or whipped cream cheese  
2 TBS. finely chopped green onions  
1 tsp. lemon juice  
Pinch ground black pepper  
1/2 tsp. Cajun spice mix  
Mix all ingredients until well blended and refrigerate.

Preheat oven to 425°F

#### Puffs:

1 c water  
1/2 c butter  
1 c flour  
2 TBS grated Romano cheese  
Pinch ground pepper  
1 tsp cream of tartar  
4 large eggs  
Put water and butter on to boil in a heavy saucepan. While water is heating, break eggs into a pouring cup. Carefully measure and sift together flour, cream of tartar, grated cheese, and pepper into a bowl.

When water comes to a boil and butter is melted,

take off heat and dump in flour all at once and beat until smooth. Add yolk and fluid of one egg, and beat in until completely incorporated. Continue one yolk at a time until eggs are gone. The batter should be thick and glossy.

Drop teaspoonfuls of batter onto a foiled cookie sheet at least 2 inches apart. Bake at 425°F for 5 minutes then drop back to 350° until the pastries are puffed and golden brown at the tips.

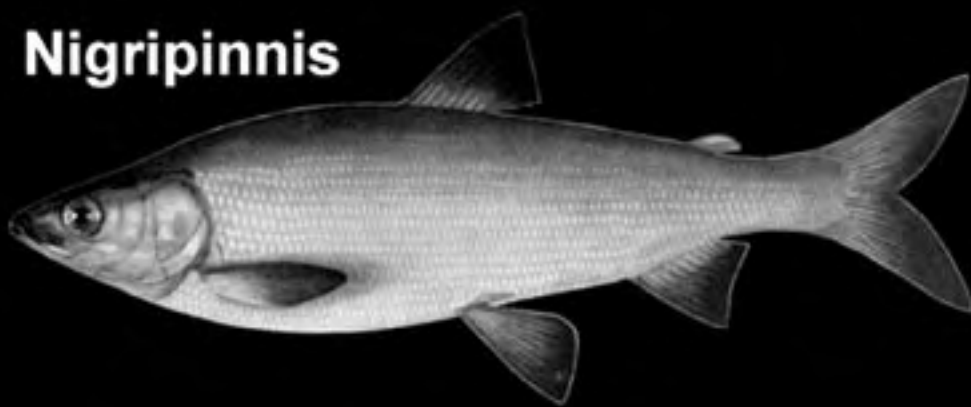
Let pastries cool. (Do not overhandle or they will fall.) Cut a slit in the side of each and fill with one-half teaspoon filling.

On special occasions, use a pastry bag to pipe out pastry batter. When cool, use another pastry bag to carefully puncture pastries and fill with one-half teaspoon of filling.

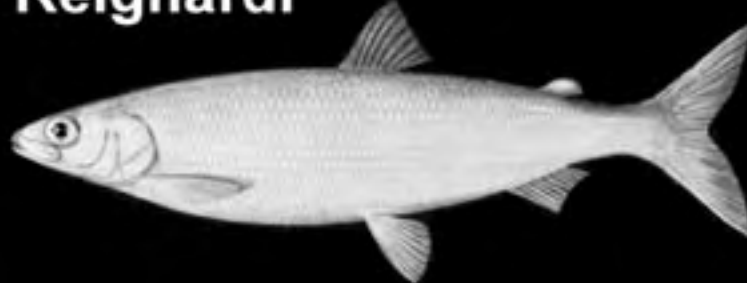
Garnish with fresh herbs such as parsley.

**How many words can you make out of the letters H-E-R-R-I-N-G? Words must be two letters or longer. Hint: there are over 20 commonly used words. Answers on page 4.**

**Nigripinnis**



**Reighardi**



**Johannae**



**Kiyi**



**Zenithicus**



**Hoyi**





## Goo balls identified ...

Last summer, people encountered mysterious pea-size blobs of gelatinous ooze washing ashore and wondered what they were. Not to fear — it was only the remnants of a zooplankton called *Holopedium gibberum*. A similar outbreak happened in 2001. Scientists aren't sure why *Holopedium* are more abundant during some summers than others. What they do know

is that adult *Holopedium* live in a mucous mantle (of their own making) that encases a pea-sized amount of water. Their legs stick out of the mantle allowing them to swim. When in residence, they often form gloppy groups as their mantles adhere. The mantles may provide protection from predators or buoyancy control for their feeding behavior, which involves



Photo courtesy of Jim Haney University of New Hampshire

A *Holopedium gibberum* inside its "goopy" mantle.

migrating towards the surface near sunset and returning to the depths during daylight. At some point, perhaps to breed, the zooplankton leave their homes and brave the open water. The biodegradable mantles (composed of one or more acid mucopolysaccharides) then float or are blown ashore.

— From *Seiche*, 10-06



Photo courtesy of the US Coast Guard

**HIGH SEAS** — On December 3, a sudden storm hit two tugboats in Lake Superior between Sault Ste. Marie and Grand Marais and the Seneca, which was being towed, was lost. The U.S. Coast Guard later found the 87-foot tug intact but grounded 18 nautical miles east of Grand Marais in approximately 3 feet of water near shore. The vessel contained 1,900 gallons of diesel fuel, 50 gallons of lubricating oil. Federal, tribal and state agencies worked together to determine the risks should the vessel begin to leak in place or break up and begin washing ashore at some point in the future. Contaminant concerns included the

potential for oiling of wintering ducks, herring gulls, and bald eagles; for oiling of migrating birds that will arrive in the spring; and for impacts to habitat along the remote, undeveloped shoreline. Further, the Seneca grounded just offshore from piping plover critical habitat, and near the Two-Hearted River, home to a self-sustaining population of steelhead. The Coast Guard removed most of the oil and hazardous substances from the tug as ice began to form around it. The USCG successfully repaired, refloated, and towed the Seneca back to port at Sault Ste. Marie, arriving on December 23.

## USCG stops gunnery exercises

In the Jan. 5 Federal Register, the US Coast Guard formally withdrew its notice of proposed rulemaking to establish safety zones throughout the Great Lakes for the purpose of conducting gunnery training.

Although the Coast Guard made it clear it is authorized to conduct such training, it withdrew the proposal "because of comments received from the public regarding the number and location of the proposed safety zones, the frequency of use, notification procedures as well as other concerns raised by the public," according to the Federal Register.

The announcement further stated that, "there will be no further gunnery training on the Great Lakes to satisfy non-emergency training requirements unless we first propose to the public and then publish a final rule," and the USCG is "evaluating all available options, including a new NPRM for gunnery training."

## Red Mysid invades Lake Michigan

Yet another exotic aquatic species from Caspian region has made it to the Great Lakes. The tiny freshwater Red Mysid shrimp, called *Hemimysis Anomala*, pictured at right, was found in Lake Michigan near Muskegon, the NOAA announced in December, probably via ballast water. The NOAA report said the shrimp is expected "to remove many smaller zooplankton species from the food chain."



Image adapted from NOAA Great Lakes Science Lab.

According to "Aquatic Invasions (2006) Volume 1, Issue 1: 4-6 : The invasive Ponto-Caspian mysid, *Hemimysis anomala*, reaches the UK," by David Holdich, the red mysid is a "voracious predator and omnivorous eater."

Holdich said the red mysid was introduced to the Soviet Union from the Black and Caspian Seas as a food fish, and spread quickly across Europe in the 1990s and has lately been found in the United Kingdom. The red mysid is able to change sexes, but can only bear 30 eggs per female. The shrimp, which measure 5.5 to 12.5 mm in length, will compete with tiny fish for zooplankton.

MDEQ spokesman Bob McCann told the *Muskegon Chronicle* that the discovery "highlights the importance of Michigan's new ballast water rules, which take effect Jan. 1, requiring officials on oceangoing freighters to prove they have technology on board to kill organisms in ballast tanks before docking in Michigan ports."

## Eagle Mine gets preliminary approval

On January 9, the Michigan Department of Environmental Quality (MDEQ) granted preliminary approval of a series of permits to the Kennecott Eagle Minerals Company to conduct sulfide mining operations at the proposed Eagle Project Mine on Yellow Dog Plains in northwestern Marquette County.

Concerns about Kennecott's permit application persist. "Kennecott is expecting the people of Michigan to trust that they can operate a sulfide mine that will not contaminate the surrounding areas, but the track record of both Kennecott and sulfide min-

Our Keweenaw Bay Indian Community is very saddened by these actions...Water is a gift of life and is sacred. We do not feel that the environment (air, land, water) is being respected or honored as we have been taught.

— Susan LaFornier, KBIC President

ing is filled with contamination and inaccurate predictions," said National Wildlife Federation Attorney Michelle Halley.

## CORA amends regulations on gear restrictions

SAULT STE. MARIE — The Chippewa Ottawa Resource Authority Commercial, Subsistence and Recreational Fishing Regulations for the 1836 Treaty Ceded Waters of Lakes Superior, Huron and Michigan have been revised to amend gear restrictions. The CORA Great Lakes Resource Committee approved the amendment at its Oct. 26, 2006, meeting. A 30-day notice was given and there were no contests. For a complete and updated copy of the CORA fishing regulations go to [www.1836cora.org](http://www.1836cora.org).

Section IX. Gear Restrictions Subsection (c.5.) on page 17 now reads:

"(c.5.) All trap nets shall have identifier markers bearing the tribal fishers commercial fishing license number placed on the pot of each net where the lead ties to the pot effective March 1, 2007."

Section IX. Gear Restrictions Subsection (m.) now reads:

"(m.) Floating buoy or staff lines on the surface of the water shall not exceed 5' (five

### "HACCP 2006," from page 1 —

The students came away with a plethora of new knowledge about seafood safety and the seafood business, met new people from other parts of the business and the country. Best of all, they were all certified in HACCP, and shared the HACCP plans developed by breakout workgroups on the third day of training. The groups came up with plans for fresh frozen fillets, smoked fish, fish sausage, caviar, smoked fish spreads, and pickled fish.

Seafood safety regulations came into effect in 1998 and HACCP certification is part of that federal law. HACCP — "Hazard Analysis and Critical Control Point" — is a system

use permit, and a MDNR lease for use of state-owned land, will take place from 1 to 10 p.m. on March 6, 7, and 8 at University Center Building, Northern Michigan University, Michigan & Huron Rooms in Marquette.

Written comments are due by April 5 to: Director Steven E. Wilson, MDEQ, Geological Survey, Minerals & Mapping Unit Supervisor, 525 W. Allegan, P. O. Box 30256, Lansing, MI 48909-7756. See the full MDEQ proposal at <http://www.deq.state.mi.us/documents/deq-ogs-land-mining-metallicmining-proposed-decision-01-2007.pdf>.

feet) in length; provided fishers may request from their tribe an exemption from this requirement for nets located on areas of strong current."

that prevents potential hazards at "critical control points" in an operation. By analyzing an operation, identifying these critical control points, or "CCPs," and developing and using a HACCP plan to prevent hazards, fishers and processors keep their products safe. The students were furnished with a copy of *Fish & Fisheries Hazards & Controls Guidance, Third Edition*. Those who took the course with the first and second editions can update to the latest edition by going to <http://www.cfsan.fda.gov/~comm/haccp4.html>

HACCP record forms will soon be available on the CORA website at [www.1836cora.org](http://www.1836cora.org).

# Great Lakes-specific Viral Hemorrhagic Septicemia spreads

Viral Hemorrhagic Septicemia (VHS) has recently caused major fish die-offs in the Great Lakes. Scores of game and non-game species died in spring and early summer of 2006 in several waters in the Great Lakes, and large fish kills were reported in the U.S. and Canada.

The boating and fishing public is strongly encouraged by fish managers throughout the Lakes to clean and disinfect their craft and gear, much like they are already encouraged to do to stop hitchhiking aquatic nuisance species.

In 2005, a new strain of VHS was determined to be the cause of a kill of freshwater drum and round goby in Lake Ontario's Bay of Quinte in

Ontario, Canada. VHS isolated from the affected fish proved to be Type 4, a strain specific to North America. It was also found in muskellunge in Michigan waters of Lake St. Clair. This same strain of VHS has now been confirmed in round goby, muskellunge, burbot and walleye in Lake Ontario, the St. Lawrence River, the Niagara River, Lake Erie and Conesus Lake, N.Y.

Last August in Minneapolis, U.S. Fish & Wildlife Service's Division of the National Fish Hatchery System convened an international body of fish health and fishery management experts to share information about this new virus in the Great Lakes, and charted an immediate course to learn more and direct future fishery management needs and research.

Last October, the USDA Animal and Plant Health Inspection Service issued a federal order prohibiting the importation of certain species of live fish from Ontario and Quebec and interstate movement of the same species from eight states bordering the Great Lakes. Then, the USDA amended federal order in November by allowing for movement of live fish under specific circumstances.

Also last November, the New York State filed emergency regulations to help prevent the spread of VHS to additional waters within New York that prohibits the commercial collection of bait fish from waters of the State where VHS has been detected, limits the personal possession and use of bait fish, and requires live fish destined for release into the waters of the State to be inspected by certified professionals and be certified to be free of VHS and other serious fish diseases.

The Minneapolis meeting resulted in recommendation that fisheries professionals use Hazard Analysis and Critical Control Point (HACCP) planning to prevent the spread of the virus. Further the Michigan DNR is enlisting the help of citizens by asking them to report sick fish or fish kills to their local DNR office. Any of the following signs could

## WHAT WE CAN DO —

- DO NOT TRANSFER fish between water bodies.
- THOROUGHLY CLEAN boats, trailers, nets, and other equipment.
- DISINFECTANT YOUR EQUIPMENT:  
Mix one part chlorine bleach to

10 parts water to clean vessels and live wells. Soak nets, anchors, and bait buckets in the same mixture for 30 minutes as an effective method to prevent the spread of VHS, and a wide range of aquatic nuisance species.

## CLINICAL SIGNS OF DISEASE IN INFECTED FISH —

### Initial outbreak (acute)

- Slight darkening of body color
- Exophthalmus (pop eye)
- Bleeding around eyes
- Bleeding under skin around base of pectoral and pelvic fins
- Skin ulceration
- Pale gills with pinpoint hemorrhages

### Lingering (chronic)

- intense darkening of skin
- Exophthalmus (pop eye)
- Gills grey-white (anaemic)

**FISH PUZZLE ANSWERS:** Err, Erg, Ern, Gin, Grin, He, Hie, Heir, Hen, Her, Hinge, Hire, Ire, Neigh, Nigh, Reign, Rein, Rig, Ring, Ringer.



Photo from [www.disease-watch.com](http://www.disease-watch.com)

**TELLTALE SIGNS —** That this rainbow had VHS is obvious from its hemorrhaging flesh and bulging eyes, and pale gills, three clinical aspects of the disease, which killed numerous species throughout the Great Lakes last year.

indicate VHS: hemorrhaging in the skin, including large red patches particularly on the sides and anterior portion of the head; multiple hemorrhages on the liver, spleen, or intestines; or hemorrhages on the swim bladder that give the otherwise transparent organ a mottled appearance. According to the Michigan DNR.

The MDNR also ask anglers and boaters to help prevent the spread of VHS by not transferring fish between water bodies, and by thoroughly cleaning boats, trailers, nets, and other equipment when

traveling between different lakes and streams. According to the MDNR, the use of a light disinfectant such as a solution of one part chlorine bleach to 10 parts water to clean vessels and live wells is very effective against VHS and other viruses and bacteria that cause disease in fish. Soaking exposed items such as live wells, nets, anchors, and bait buckets in a light disinfectant for 30 minutes is also an effective method to prevent the spread of a wide range of aquatic nuisance species.

## HW HOCKS FOR SALE



**FISHING VESSEL FOR SALE —** H. W. Hocks, 48-foot + 13-foot + 6 draft. CAT D-13000 6 Inline, Power Take Off, Pony Motor Starter. Twin Disk Trany, 4-inch Propeller Shaft, Large Rudder. New 24-mile Radar, 600-foot Depth Finder, GPS, Large 8-inch Compass, and 30" Crosely gill net lifter. Warm Vessel: Coal and Wood Stove. Contact Skip Parish Sr. at 248-2848.

## 36-FOOT TRAP NET BOAT



**SHAMROCK FOR SALE —** The beautiful 36-foot, diesel-powered trap net boat "Shamrock" is for sale for \$40,000. Included is a new Perkins 115T motor and a 4-axle trailer. Call 248-2150.

The next deadline for the CORA newsletter "Preserving the Resource" is Monday, March 5, 2007. Call or write Jennifer Dale-Burton at the CORA Public Information & Education Program, 906-632-0043, or [jmdale@chippewaottawa.org](mailto:jmdale@chippewaottawa.org).

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## 42-foot Gill Net Tug



**FOR SALE — 42' Gill Net Tug "Niibing Nimnido"** (Formerly the "Francis Clark"). This steel tug was constructed in the 1950s, but has been well maintained and is very clean. The vessel is powered by a 630 Caterpillar diesel engine and has a 30" lifter. Currently docked at the Arthur Duhamel Marina at Peshawbestown, Mich. Contact Don Chippewa or Rose Weese at 1645 S. Center Highway, Suttons Bay, MI 49682, for more information. Or, contact the Grand Traverse Band Natural Resources Department at 231-534-7500 to relay a message.