

# Zebra mussels stir freshwater concerns

**T**HE INVASION is on. The zebra mussel has arrived. Although relatively new to the waters of the Great Lakes, the zebra mussel is already causing an uproar among boaters, anglers, recreationalists and some lake shore industrial and commercial communities.

Increased colonization of the zebra mussels specifically in Lake Erie — has raised such concerns among sport fishers that it prompted show organizers to devote two seminars to the topic last week-end at the Southeastern Michigan Sportfishing Expo at the Palace of Auburn Hills.

The zebra mussel has been a resident of most European lakes for the last 200 years, but more recently has found a new home in the Great Lakes.

In 1985, the zebra mussel landed in Lake St. Clair, transported there in the ballast of international cargo ships.

One theory about why we haven't seen the zebra mussel any sooner is that Europe has been on a clean water kick for the past several years. Prior to this time, the commercial ports would have been simply too polluted for the mussel to survive.

Now the question that arises is: What effect will the zebra mussel

have on our freshwater lakes?

**ADULT ZEBRA MUSSELS**, which can live up to six years and grow up to two inches in length, are generally about the size of a fingernail. They'll attach themselves to any non-toxic hard surface such as reefs, rocks, boats, outdrives, outboard motor lower units, docks, intake pipes and other mussels.

In many instances, the mussels attach to other zebra mussels, which rapidly produces a thick bed of mussels. These beds in some parts of Lake Erie now contain up to 70,000 mussels per square meter.

"European lakes have developed with the zebra mussels, but our lakes haven't," said Fred Snyder, sea grant extension specialist. Snyder conducted a symposium on the subject at the Auburn Hills show.

"Now that they are here, it's like dropping a biological time bomb in our lakes. They are still very new to us, and we really don't know how big a problem they'll present in the future."

A mature female zebra mussel can produce as many as 40,000 eggs per season. About 10 percent of those eggs normally survive, and their potential for rapid reproduction is what raises much concern.

The eggs are fertilized outside the



Bill Parker  
outdoors

shell of the adults and develop into free-swimming larvae within a few days. These larvae can keep themselves floating in the water for up to eight days which allows the current to scatter them throughout a lake.

The potential for the zebra mussel to infest other bodies of fresh water is another concern.

The zebra mussel larvae can survive overnight with very little water and may hitch a ride to another body of fresh water through an angler's line well or minnow bucket or on the wet fur or feathers of wildlife or waterfowl.

Young adults can survive out of water up to two weeks. Unlike barnacles, which attach themselves to an object for life, a zebra mussel can remain attached to one surface for a while then release itself to find another host.

Once attached to a boat, for instance, the zebra mussel can hitch a ride to another body of water, drop

off and make a new home.

**ZEBRA MUSSELS** feed mostly on single-cell algae and consume this food by filtering water through their bodies.

Each adult mussel can filter up to one liter of water a day. The zebra mussel sucks water over a mucus membrane and catches micro organisms including algae and plankton.

All these organisms are filtered from the water, but instead of passing the unused particles — including plankton — back into the water, the zebra mussel covers its waste with a mucus, which forms little pellets called pseudofeces. These pseudofeces are released back into the water and often end up sticking to the outer shells of one of the mussels in a colony.

Because of this method of discharging unused matter, plankton — which is the base of the Great Lakes food chain — is removed from the water and unavailable for micro-

scopic crustaceans, which feed many larval and juvenile fish, and plankton-feeding forage fish, which support the sport and commercial fisheries in the Great Lakes.

When reefs become covered with colonies of zebra mussels, problems may arise in the reproduction cycle of reef-spawning fish such as walleye and smallmouth bass.

Zebra mussels attach themselves to reefs, then on top of each other and sometimes form layers several inches thick. As hundreds of thousands of zebra mussels release the pseudofeces in the reef area, the area may become unlivable for hatching fry.

As the waste particles in the pseudofeces decompose, oxygen is depleted from the water and the water becomes acidic.

Will the food chain seriously be affected by the zebra mussel? "The potential is there, but at this early stage we really don't know yet," Snyder said. "I think there will be some changes, but let's not sell our boats just yet."

**ITS NOT JUST** the angler and boaters that will feel the effect of the zebra mussel.

Lake shore industry has already been affected.

Since the mussel attaches itself to hard surfaces, intake pipes on electric and water treatment plants become prime targets for colonization. When this occurs, pipes become partially or totally clogged, which limits the pumping capacity.

Last summer, a clogged intake pipe at a Monroe electric facility caused a generator to shut down. Last year in Monroe, the city was forced to ration water because the intake pipe to its water treatment plant became clogged with zebra mussels.

Cleveland, Ohio's, electric facility is spending \$50 million to redesign water intake pipes to combat the

zebra mussels.

"Who will pay for this, the stockholder or the consumer?"

Beach-goers on the Canadian side of Lake Erie have also felt the impact of the zebra mussel. As waves wash the mussel shells ashore, beaches become covered with the tiny, sharp shells.

Last summer, as shells accumulated along several Canadian beaches, a tennis shoe advisory was issued.

**THE ZEBRA MUSSEL** has been found in lakes St. Clair, Erie, and Ontario and in the St. Lawrence River. The largest populations have been found in the western basin of Lake Erie.

"There are some unconfirmed reports that they have been found at the lower end of Lake Huron, spots in Lake Michigan and in Saginaw Bay. These reports are unconfirmed, but not surprising, especially in Saginaw Bay where the shallow, fertile water is to their liking."

The only natural predators we seem to have include deep-diving ducks — such as the scup and canvasback — and some fish, such as the sheepshead or freshwater drum. But what effect these predators in undetermined.

Boaters and anglers can fight the spread of the zebra mussel by painting their boats, out drives and docks with an anti-fouling paint. (Check with your local marina because slow-release polymers of tributyltin (TBT) are illegal in the state.)

Live wells and minnow buckets can be disinfected with a 10-to-1 solution of water and chlorine bleach, which will kill any larvae. Water in a cooling system should be run out.

"The zebra mussel is coming soon to a lake near you. They are coming. You will see them, and in time they will affect every freshwater lake in Michigan."

The question now is just how big of an effect will they have.

## outdoors calendar

### IMPORTANT DATES AND EVENTS

• April 3 — The Black Powder Committee of the Western Wayne County Conservation Association will sponsor a turkey shoot from 10 a.m. to 2 p.m. on the club's shooting range in Plymouth Township. Only firearms using black powder will be used. Fee is \$5 for non-members. Call 453-9843 between 10 a.m. and 5:45 p.m. for more information.

• April 19 — Paul H. Young Chapter of Trout Unlimited will hold its annual fund-raising banquet beginning at 5:30 p.m. at the Royalty House in Warren. Former Tiger great Jim Northrup will emcee the event. Banquet tickets, which include cocktails and dinner and must be bought in advance, are \$35 each. Proceeds from the banquet will be used by the Paul H. Young Chapter on various projects to improve the quality of Michigan's coldwater lakes and streams. For ticket information call Rick Reid weekdays at 353-4565.

353-4565.

• April 21 — River Crab Salmon Stakes fishing tournament, with an additional walleye division this year, will be in St. Clair. Proceeds from the sale of \$10 raffle/entry tickets will be used to benefit child abuse and neglect programs statewide. Tickets are available at the Northwest Guidance Clinic, 6012 Merriam, Garden City; The Sanctuary Inc., 1235 S. Washington; Royal Oak or by calling the River Crab at 329-2216.

• April 22 — Riverbend Sport Shop, at 29229 Northwestern Highway, Southfield, will conduct a fly fishing class. Course fee is \$90 and includes equipment and lunch. Additional classes will be on April 29, May 6 and 20, June 3 and 10 and July 12 and 22. Each class is limited to 12 students. Call 350-6484 for more information.

• April 27 — Trout season opens on designated trout streams and trout lakes.

• April 29 — The Western

Wayne County Conservation Association will hold a 3-D archery shoot at its walk-through range in Plymouth. The shoot is open to the public and archers may use their own equipment or arrangements with the WCCA staff to try out a bow. Call 453-9843 during business hours or 525-1388 evenings for more information.

• June 9-10 — Free Fishing Weekend statewide.

### METROPARKS

• Nature Sketching for Adult Beginners, the final class in a series of three for adults who wish to learn about animals, will be offered at 1 p.m. Saturday at Kensington.

• Eggstraordinary, Egggetting Eggs, a day of fun activities for preschool and elementary school children including egg olympics, egg crafts, egg trivia and egg experi-

ments, will be offered at 11 a.m. Sunday at Stony Creek.

• Nature Sketching for 8- to 11-year-olds, a two-hour program in which children can improve their drawing skills while learning about wildlife, will be offered at 2 p.m. Sunday at Kensington.

• Full Moon Walk, an opportunity to experience the sights and sounds of the evening while searching for wildlife, will be offered at 7:30 p.m. Monday at both Kensington and Stony Creek.

• Snipping the Hogs, a program in which children can learn about life on the farm, will be offered at 3 p.m. Saturday, April 14, at the Kensington Farm Center.

• Early Spring Wildflowers, a walk through the park in search of spring wildflowers, will be offered at 2 p.m. Sunday, April 15, at Kensington.

## BE A BETTER BOATER Take a Safe Boating Course

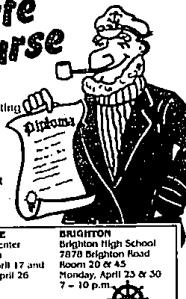
Everyone can benefit from a safe boating class. Upon completion, you'll be a better, more confident boater. Plus, you can save money on boat insurance premiums! Sign up now for the new 2-day NIBA "Captain's Class." This introductory class, taught by the DNR Marine Safety Division, covers the fundamentals of boating and safety.

**MT. CLEMENS**  
Independence Bldg.,  
Freedom Hill Co. Park  
15000 Metro Pkwy.  
Billerica Center Room  
Tuesday, April 24 & May 1  
7-10 p.m.

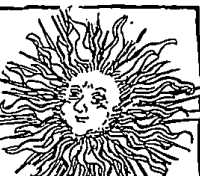
**WYANDOTTE**  
Copeland Center  
2506 Fourth  
Tuesday, April 17  
Thursday, April 26  
Tuesday, April 24 & May 1  
7-10 p.m.

**BRIGHTON**  
Brighton High School  
7870 Brighton Road  
Room 20 & 45  
Monday, April 23 & 30  
7-10 p.m.

Call 313-344-1330 or 800-482-8604 for more information and pre-registration.



Knowledge, in truth,  
is the great sun . . .



### Bachelor's Degree Programs for Adult Students

This summer the University Studies/Weekend College Program at Wayne State can help you achieve your educational goals. Specifically designed for men and women who find it difficult to attend traditional classes on the main campus, the Weekend College enables busy adults to earn their bachelor's degree in five years or less by:

- attending class once or twice a week at various locations throughout the metropolitan Detroit area.
- watching television courses at home.

• attending weekend conference courses on the Wayne State campus

FOR MORE INFORMATION, CALL 577-0836



College of Lifelong Learning  
University Studies/Weekend College Program

Wayne State University is an Equal Opportunity/Affirmative Action Employer

## NEW HUDSON Fence Co., Inc.

A DIVISION OF NATIONWIDE FENCE & SUPPLY CO.

S. LYONS  
PHONE NUMBER

437-2074



NOVI  
PHONE NUMBER

349-8350

### WE DO IT ALL! WE COME TO YOU!

- Residential • Commercial • Industrial

#### COMPLETE LINE ON:

- CUSTOM CEDAR FENCE (Michigan White) (Western Red) SPLIT RAIL
- WHITE WOOD FENCE
- CHAIN LINK
- COLOR SYSTEMS
- ORNAMENTAL ALUMINUM
- DOG KENNELS-PORTABLE
- FARM FENCING
- CUSTOM GATES - MADE TO ORDER
- ELECTRIC GATE OPERATORS
- TENNIS COURTS
- SNOW FENCE
- BACKSTOPS

Do It Yourself or Installed  
On Site Estimates

1-800-462-0101

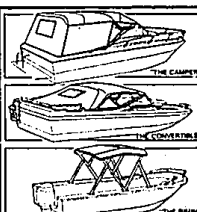


### Twice a week is better

#### E-X-P-A-N-D-I-N-G

A TRADITION of food and shelter and s-t-r-e-t-c-h-i-n-g your donation dollars

contribute to:  
**PONTIAC Rescue Mission**  
P.O. Box 3590-B  
Pontiac, MI 48059  
YOUR CONTRIBUTIONS ARE TAX DEDUCTIBLE



We specialize in custom  
Tops & Covers  
Boats kept inside

**CANVAS CONCEPTS**  
BOAT TOPS & COVERS  
12511 Globe  
Livonia, MI  
313-464-9422

## SPECIALISTS IN ARCHITECTURAL WOODWORK

Library's  
Den's  
Cabinets  
•  
additions  
kitchens  
basements



**STERLING IMAGE CONSTRUCTION**  
30400 Telegraph Rd. • Suite 347 • Birmingham • 644-5900

## Now That Your Investments Require More Thought...

For 57 years we have been helping clients solve their individual investment problems. At Hamilton Investments we believe that your investment decisions should be clear, concise and custom fit to your needs. From Pre-Retirement planning to your child's college fund, from Tax-Free municipal Bonds to Tax-Deferred Annuities, Hamilton Investments can provide the plan and the program.

For solid investment advice call

1-800-342-6280

or send the attached coupon to:

**HAMILTON INVESTMENTS**  
29580 NORTHWESTERN HWY. • SUITE 104  
Southfield, MI 48034

### HAMILTON INVESTMENTS

Now send me information on the following:

- ☐ Pre-Retirement Planning ☐ Annuities ☐ College Funds
- ☐ Equities, Mutual Funds & Options ☐ Tax Free Funds

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone (Home) \_\_\_\_\_ Work \_\_\_\_\_  
Return to:

29580 Northwestern Hwy. • Suite 104 • Southfield, MI 48034