



**THE CONSERVATION PARTNERSHIP
ST CROIX NATIONAL SCENIC RIVERWAY
BOX 708
ST CROIX FALLS WI 54024-0708**

Place
Stamp
Here

For more information, please call:

The National Park Service
St. Croix National Scenic Riverway
St. Croix Falls, Wisconsin
(715) 483-3284

Minnesota Department of Natural Resources
Twin Cities, Minnesota
(612) 296-2835

Wisconsin Department of Natural Resources
Eau Claire, Wisconsin
(715) 839-3747

U.S. Fish & Wildlife Service
Twin Cities, Minnesota
(612) 725-3548
or
T.D.D. (612) 725-3131

MN-WI Boundary Area Commission
Hudson, Wisconsin
from Minnesota (612) 436-7131
from Wisconsin (715) 386-9444

Minnesota Sea Grant
Zebra Mussel Information Line
Twin Cities, MN
(612) 625-9288

Zebra Mussels at a Glance



What are they?

Zebra mussels are a small, two-shelled clam that grows to two inches long. Light and dark bands give the D-shaped shell a zebra-like appearance. They produce a tuft of fibers known as byssal threads which allow them to attach to hard surfaces.

Where did they come from?

Zebra mussels originated in western Russia in the area of the Caspian Sea. Canals allowed the mussels to gradually spread through Europe. While native birds, fish and pollution have limited their effect, Europeans have not found a way to get rid of them. Zebra mussels are believed to have entered United States waters when discharged into Lake St. Clair from the ballast water of a transoceanic ship. They then spread through the Great Lakes and down the Illinois canal to the Mississippi. Barges have been one of the major carriers of the zebra mussels.

Why are they a problem?

A mature female mussel produces more than 30,000 eggs each year. The young mussels (veligers) drift with the current for three to four weeks, then attach to a hard surface. When zebra mussels concentrate, they can clog water intake valves and engine outdrives causing expensive shut downs, repairs and replacements of treatment systems. They can also cause damage to docks, breakwaters, and boats. Zebra mussels consume significant amounts of phytoplankton, the base of the food chain, drastically reducing the food available for native mussels and fish. They have killed many native mussel species. The St. Croix River is home to two endangered species of mussels, as well as 40 other native mussel species.

So far, these exotic mussels have cost utility companies and recreationists millions of dollars. Future costs are expected to be high.

What are we doing?

Zebra mussels are present in all the Great Lakes, Mississippi River downstream of Minneapolis and the lower Minnesota River. So far we have no evidence that zebra mussels are in the St. Croix River. As the veligers cannot float up river, there is little chance that they can get above the Kinnickinnic Narrows without human assistance. To protect the St. Croix River, we are restricting boat traffic to prevent their introduction. Boats that have been below the Kinnickinnic Narrows or in other infested waters will not be allowed above the Arcola Sandbar. National Park Service Law Enforcement Rangers aboard a floating ranger station will be anchored at the Arcola Sandbar. In addition, we are

actively educating the public about zebra mussels and are monitoring the river for their presence.

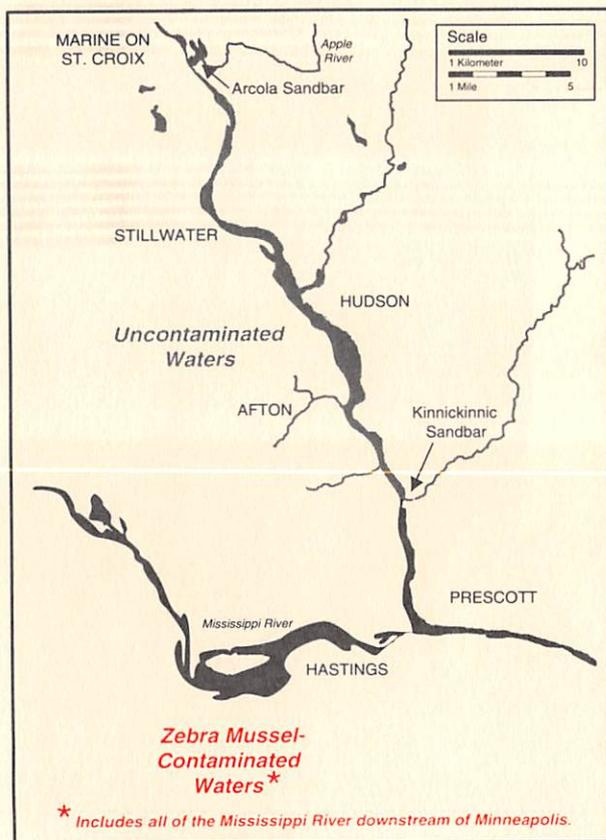
What you can do to help?

Thoroughly wash your boat with hot water (140°F) and flush your motor to kill any mussels that might have attached. Let your boat sit out in the sun for at least five days before launching in non-contaminated waters. Check your boat and equipment regularly. Drain your bait bucket on land. These efforts will help to protect the St. Croix River.

The future?

At this time there is no known way to eliminate zebra mussels. Some native species, such as ducks and fish eat the mussels, but not enough to limit the population. Researchers are looking for ways to reduce or eliminate zebra mussel populations. Their arrival in North America is so recent that the research has just begun. We hope to delay their introduction until a way is found to control them, so that you can continue to experience and enjoy

Zebra Mussel-Contaminated Waters* as of April 1, 1994



the St. Croix as an outstanding recreational and natural area.

Zebra Mussel Alert

How to clean Your Boat if You Have Been Boating in Infested Waters

1. VISUAL INSPECTION AND REMOVAL

Look for zebra mussels attached to your boat and equipment. Adult mussels are less than 2 inches long. Their light and dark bands give the shell the zebra-like appearance. They produce a tuft of fibers which enable the mussel to attach to hard surfaces. Remove all zebra mussels from your boat, trailer and equipment and treat them like litter. Put them in a trash can. Remember, remove all plant material you find while looking for zebra mussels. They can attach to plants and species such as Eurasian Milfoil.

2. DECONTAMINATE YOUR BOAT AND EQUIPMENT

Perform one or both of the procedures listed:

A. Thoroughly hose down the hull surface, transom, keels, drive units, wet wells, bilges, trailer, bait buckets, etc. with hot (140°F) water. Most household water heaters can achieve water temperatures up to 140°F, and are able to accept a standard hose hook-up. Be sure to use a commercial grade hose that is capable of withstanding high temperatures. Zebra mussels are susceptible to hot water and a good soaking will kill both larvae and adults.

B. Let your boat and equipment dry completely for five days before you use it in uninfested waters. If it rains during the 5-day period, add an additional day to the number of drying days remaining. Be sure to drain all areas where water may collect. Hot water treatments combined with drying provides twice the protection!

The Saint Croix National Scenic Riverway Conservation Partnership MEMBERSHIP FORM

The Saint Croix River Conservation Partnership has been established in an effort to bring governments, industry, organizations, and individuals together to work to protect the Saint Croix River and its tributaries from zebra mussel infestation. The Conservation Partnership is a voluntary program that calls upon all participants to take the steps necessary to avoid the spread of zebra mussels to uncontaminated waters.

By signing this membership form, you are indicating your willingness to protect the Saint Croix River from possible infestation of zebra mussels.

"As a member of the St. Croix River Conservation Partnership, I will do my utmost to stop the spread of zebra mussels. I will avoid bringing boats and other equipment to the St. Croix that have been exposed to zebra mussel infested waters, or when that is not

possible, I will follow the recommended procedures to decontaminate any exposed boats and equipment before entering the St. Croix River system."

Please Remember! The St. Croix River Conservation Partnership is a voluntary program, requiring a good faith effort on the part of all members and others who care about the scenic, recreational, commercial, industrial, and environmental values of the St. Croix River and its tributaries.

Spread the word! Discuss this issue with your friends and neighbors, if given the opportunity, and let them know where they can call to get more information. . . . because they may not be aware that to knowingly transport or possess zebra mussels can be a violation of Federal law (16 U.S.C. 3373 D 2).

**YOUR MEMBERSHIP IS WELCOMED
YOUR HELP IS DEEPLY APPRECIATED**

"As a member of the St. Croix River Conservation Partnership, I will do my utmost to stop the spread of zebra mussels. I will avoid bringing boats and other equipment to the St. Croix that have been exposed to zebra mussel infested waters, or when avoidance is not possible, I will follow the recommended procedures to decontaminate any exposed boats and equipment before entering the St. Croix River system."

NAME: _____ SIGNATURE: _____

MAILING ADDRESS _____ (Print)

ZIP _____

DATE: _____