Auburn University
Marine Extension
& Research Center
SEA GRANT EXTENSION

The Zebra Mussel Invasion *IN ALABAMA*

MASGP-95-008

ZEBRA MUSSELS:

Invading Alabama's Waters

Zebra mussels are an extremely adaptable exotic species that have become well-established in the Great Lakes and are now settling in southern fresh waters. They have no known natural predators, multiply rapidly, feed on phytoplankton (microscopic aquatic plants) and settle on **any** hard surface, even on top of each other.

As a result, they may rapidly reduce the inside diameter of an intake pipe or fill in the spaces in an outboard boat motor, blocking the flow of air or water. In Monroe, Michigan a power plant was actually shut down by zebra mussels. They can disrupt any industrial facility with a raw water intake from a fresh waterbody, including irrigation and aquaculture intakes.

They feed voraciously and hoard the food they cannot immediately consume by binding it with a mucus that makes it unavailable to other animals. Their feeding is so efficient that they could disrupt freshwater food chains and cause major decreases in our fish populations.

Zebra mussels have been confirmed in the Mississippi, Atchafalaya, Tennessee, Red, White, and Arkansas Rivers in the southern region. Two major waterways, the Mississippi and the Tenn-Tom, are both heavily used by barge traffic and contain colonies of these animals.

If zebra mussels aren't in your county yet, they will be soon unless Alabamians act now to slow the spread of this alien invader. These animals are often transported by barge traffic or recreational boaters as they move from zebra mussel-infested rivers and lakes to our uninfested waters.

It was originally thought that these animals were not a real threat to the southern United States because they were a cold-water species. However, recent research at Louisiana State University and the University of Texas suggests that zebra mussels are adapting to both higher temperatures and low salinity water as they migrate southward.

Research is also being conducted by the Corps of Engineers and Tennessee Valley Authority on zebra mussels. The U.S. Fish and Wildlife Service monitors zebra mussels in southern waters and the National Biological Service compiles a map of zebra mussel sightings bimonthly.

The Auburn University Department of Fisheries and Allied Aquacultures has several zebra mussel research projects underway in Alabama. Public awareness and education programs on the zebra mussel invasion are being conducted by Alabama Sea Grant Extension and the Alabama Cooperative Extension Service for both youth and general audiences.

COMMONLY ASKED QUESTIONS ABOUT ZEBRA MUSSELS

- WHAT DO THEY LOOK LIKE?

Zebra mussels are tiny mollusks (clam-like animals) about the size of an adult fingernail with a zebra-striped pattern on the shell.

- WHERE DID THEY COME FROM?

These animals were first discovered in the Caspian Sea - Ural Mountain area of the former Soviet Union about 200 years ago. They entered the U.S. about 1986 in the ballast of an ocean-going vessel trading in the Great Lakes and began to colonize Lake St. Clair adjacent to the Great Lakes in 1988. Large numbers of zebra mussels now exist in most of the Great Lakes with only Lake Superior avoiding heavy colonization.

- HOW SERIOUS IS THIS THREAT?

Industries in numerous states including Louisiana, Mississippi and Alabama have begun to request information about zebra mussels. Many have begun monitoring for the mussels; some are now treating with molluscicides. Others are using anoxia or lack of oxygen and thermal measures to control the mussels. There is no *perfect* control method.

California and Florida have enacted regulations making it illegal to knowingly bring zebra mussels into the state. These animals can live for several days after they are taken out of the water. Live mussels have been found on some incoming trailered vessels during inspections made at the California state line.

Some recreational lakes in the Great Lakes region have been closed to visitors and tourists and only landholders can use them. Some reservoirs, previously open to public recreation are now restricted. The reason is to exclude the possibilities of zebra mussel infestation from transient vessels.

Arkansas aquaculture businesses were refused entry into other states to deliver fingerlings after zebra mussels were confirmed in the Arkansas and White Rivers. The state had to devise a method of certifying that the aquaculture sources for the fingerlings were free of zebra mussels before business could continue.

HOW YOU CAN HELP

- Become more aware and knowledgable about how to slow the spread of zebra mussels in Alabama by participating in Sea Grant Extension and ACES educational programs.
- If you are a recreational boater or fisherman, request additional zebra mussel related boating information from the Auburn Marine Center or your County Agent.
- If you work in an industry that has a freshwater intake, please give this brochure to someone in the engineering department and ask them to contact the Auburn Marine Center.
- If you are involved in aquaculture, request additional zebra mussel related information from the Auburn Fisheries Department or your County Agent.
- It will take all of us working together to slow the spread of zebra mussels in Alabama. Thanks in advance for your help!

SOURCES OF ADDITIONAL ZEBRA MUSSEL INFORMATION

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