MUSSELS AND CLAMS AND WATER MILFOIL MUSCLING IN

Non-native Species Threaten Freshwater Resources

The zebra mussel is often tiny—about as long as a fingernail—but its impact on the U.S. economy is huge. In the Great Lakes Basin alone, agencies and individuals have spent about $3 billion over a decade mitigating damage caused by the mollusk, which reproduces rapidly, clogging everything from boat motors to the water-intake systems of power plants. The intruder from the Caspian and Black seas also wreaks ecological havoc, hoarding valuable nutrients and destroying native mussels.

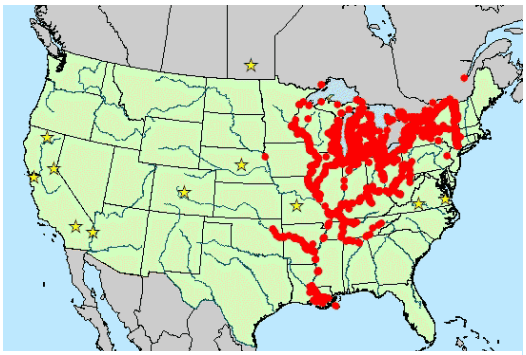
Zebra mussels encrusting a fragile papershell mussel (*Leptodea fragilis*). Courtesy D. W. Schlorsser, USGS

Other aquatic invasive species have equally devastating effects. Now, The Nature Conservancy is pushing for federal legislation that would increase spending aimed at combating the problem. The National Aquatic Invasive Species Act of 2003 would authorize spending some $167 million per year, more than eight times the current appropriation. "Compared to the actual cost of the invasives," says Vernon Ehlers, a Michigan congressman and a sponsor of the bill, "we're seeking a small amount."

In many cases, eradicating established invaders is impossible. The Asian clam, now found in 38 states, is muscling aside native mollusks from the Tennessee River to San Francisco Bay. Eurasian water milfoil—a submerged plant that forms dense canopies, shading out native vegetation and inhibiting swimming and boating—also has spread throughout much of the country.

"We believe that all of our conservation accomplishments are at risk because of invasive species," says Ann Bartuska, who heads the Conservancy's efforts to combat the intruders. She notes that invasive species and habitat fragmentation rank as the top threats to biodiversity globally.

The new legislation (which expands on a 1996 law) focuses on keeping out new aquatic intruders and stopping the spread of those that have already taken hold. It would require ships destined for U.S. ports to replenish their ballast water while at sea, a practice that purges more than 95 percent of live organisms. (The zebra mussel arrived in Michigan in 1988 as a stowaway in ballast water.) The act would also establish a process to screen potential invasive species slated for importation, set up a research program and set aside money so states could respond to new infestations.



Zebra mussel distribution (red) and discovery on trailered boats (stars), 2003. Map courtesy of USGS.

Aquatic invaders also concern groups whose interests are not so much ecological as economic. The Idaho Water Users Association, for example, which represents water companies and irrigation districts, has worked with the Conservancy on this issue. The zebra mussel has not been found in waters west of the 100th meridian, which runs south through the center of North Dakota, but live specimens were discovered two years ago on a trailered boat in Spokane, Washington.

Some fear that the thousands of people expected to retrace the route of Lewis and Clark in 2004 (the 200th anniversary of their expedition) may unwittingly transport zebra mussels and other invaders to Western waters.

However invasives are transported, "our irrigation communities spend thousands of dollars each year dealing with the pests and weeds that we already have," says Norm Semanko, head of the Idaho Water Users Association. "We don't need any more."

—Ben Gose
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Help Stop Invasive Species

- Verify that the plants you buy are not invasive. To identify invasive plants, check with your state's Exotic Pest Plant Council or a local nursery or agricultural extension agency.
- Replace invasive plants, such as purple loosestrife and Eurasian water milfoil, with noninvasive alternatives.
- Thoroughly clean boats, trailers and anything else that comes in contact with water before transporting them to other waters.
- Don't release aquarium fish, plants or live bait into the wild.
- Volunteer to remove invasives at a local park or preserve.