

# Protecting Our Environment

## Targeting The Invaders

(NAPSA)—Aliens are landing here that could destroy our way of life. They're not strange creatures from another planet, however. They're invasive species—microbes, mammals and many others—that are alien to our shores and that rob native plants and animals of the space and sustenance they need to survive. An area twice the size of the state of Delaware is overtaken by invasive plants each year. Animals and microbes add to this silent invasion that costs the nation more than \$100 billion annually in lost resources and productivity and erodes America's biological heritage.

"The spread of invasive plants, animals and pathogens is considered one of the most serious ecological problems facing our nation," explains Charles Groat, director of the U.S. Geological Survey, the sole science agency for the U.S. Department of the Interior. "These species include plants, animals and microbes that have been introduced into an environment where they did not evolve and often have no natural enemies to limit their reproduction and spread—frequently at the expense of native plants and animals and, sometimes, of entire ecosystems," he adds.

Many of these invaders, the USGS reports, cause huge losses in agriculture, livestock, fisheries, and other resource production systems. Some significantly alter ecosystems, resulting in costly damages due to increases in fire, flooding and erosion. A few even



**Tiny, foreign shellfish called zebra mussels are doing big damage to our ecology and our economy by anchoring themselves by the thousands to factories and water treatment plants as well as to native mussels. As many as 10,000 zebra mussels have attached to a single native mussel, nearly wiping out the indigenous species in many places.**

carry human diseases.

Unfortunately, the invaders often go unnoticed until they have spread, making eradication difficult. "Early detection and rapid response to invasions are essential if we are to prevent major damage to the health of our ecosystems and economy—an ounce of prevention is truly worth a pound of cure," says Groat.

Fortunately, he says, "our land and its water and the inhabitants of both can be preserved and protected, as long as we have a sound scientific understanding of the living, dynamic systems they represent."

You can learn more about invasive species and earth science solutions online at [ask.usgs.gov](http://ask.usgs.gov).

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*Note to Editor: This article is part of an awareness series for Earth Science Week, October 7-13, 2001, sponsored by the American Geological Institute, a partner of the USGS. However, this article is evergreen and can be used any time.*