

FOCUS

Wild Arizona

Key Words

Filter feeder: an organism that eats by straining small particles from the water

Invasive species: a plant or animal that has been brought from another area. Once established in the wild, it causes or is likely to cause economic or environmental harm, or harm to human health.

Meridian: an imaginary line that runs from the North Pole to the South Pole

Mussel: an aquatic animal such as a clam, with a soft body protected by a hard shell

In January 2007, the quagga mussel first was detected in Arizona. Normally, the discovery of a new species would be reason to celebrate. However, this is very bad news for the state.

The quagga mussel, along with the similar zebra mussel, are considered **invasive species**. Originally from Europe, these mussels have no natural predators in North America. Without major predators, what do you think might happen to the number of mussels?

With no animals to control them, the number of mussels increases. To make things worse, they can release about 1 million eggs each year! They spread quickly, often by attaching to boats.

The mussels are **filter feeders**. Once in a location, they can take food away

from other animals. What do you think could happen to a river or lake if these mussels take this food away?

Geography fun:

In 1988, the first population of zebra mussels in North America was discovered in Lake St. Clair, just east of Detroit, Mich. From there, they spread quickly to the Great Lakes, particularly lakes Erie and Huron. Michigan and Ohio were the only two states impacted at the time. Now, 20 years later, many more states have been invaded by zebra and quagga mussels.

The map at right shows the states recording mussel invasion every five years. Use the map to answer the following questions.

How many states had the mussels in each year?

1993 _____ 2003 _____

1998 _____ 2008 _____

Which states reported the invasion for the first time in 2008?

Which five-year period saw the largest increase in the number of states with mussels? The smallest?

As zebra and quagga mussels started to invade North America, government agencies began an effort to fight them. The goal was to stop or slow their spread at the **100th meridian**, an imaginary line that divides the United States almost in half. This line is marked on the map.

About how long did it take between the first year mussels were reported and the year they moved west of the 100th meridian for the first time?

Create a line graph to show the number of states that reported the mussel invasions from 1988 to 2008.

A steep line means that the mussels are spreading quickly. A flat line means they are spreading slowly. Does the spread of the mussels seem to be slowing down or speeding up?

In your opinion, were efforts to slow the spread of mussels successful?

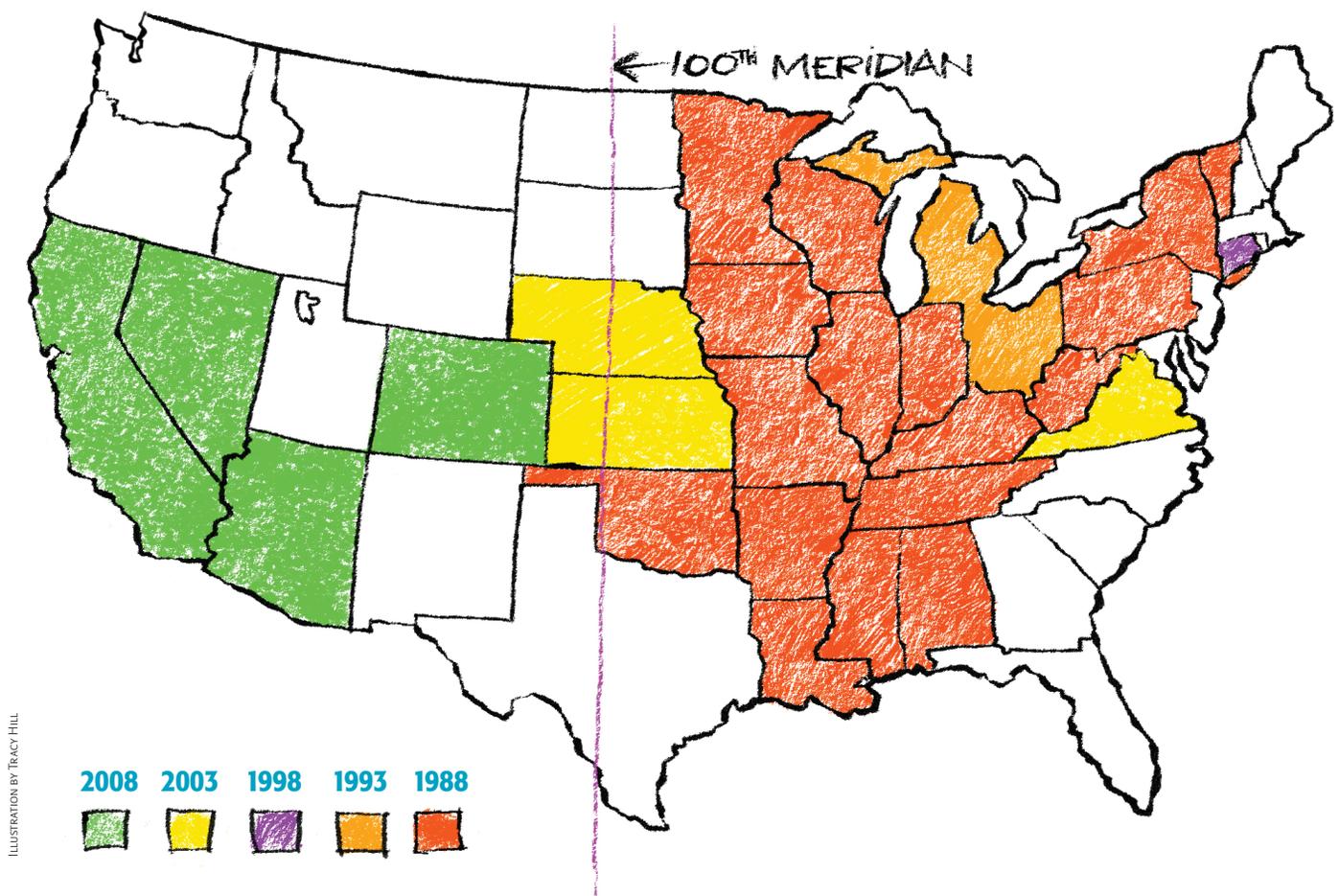
Based on your graph, how many states do you predict will have these mussels by 2013? _____ 2018? _____

Pretend you work for a state that does not have zebra or quagga mussels. What could you do to prevent their spread into your state? 🦋



By Eric Proctor

Contiguous United States



▪ This feature is part of the Arizona Game and Fish Department's Focus Wild Arizona program, a free educational program for teachers, parents, students

or anyone interested in learning about wildlife and habitat. Visit our Web site, www.azgfd.gov/focuswild, to find exciting lessons and resources.

For more information about the mussel invasion, visit us online at www.azgfd.gov/mussels.