

VAMPIRE

In the 1940s, bloodsucking fish took over America's largest lakes. Could they be stopped?

BY ALESSANDRA POTENZA



Synthesizing As you read this story and the map on pages 20-21, think about why invasive species are a problem.

**LOOK FOR
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11 TERMS IN
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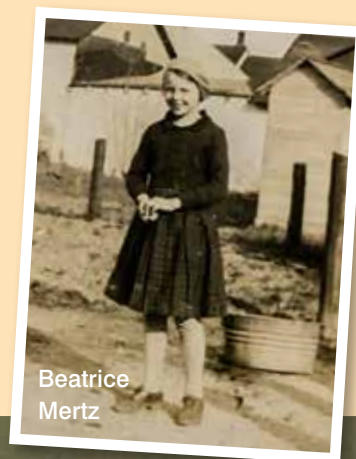
Eleven-year-old Beatrice Mertz held a wet, wiggling creature in her hand. It stretched from her fingers to her elbow. It had a round mouth with more than 100 super-sharp teeth. It looked like a snake. But it was really a fish. And it was her job to kill it.

Quickly, Beatrice cut the creature's head off with a sharp knife. What a relief, she thought.

The year was 1941. Beatrice had been working summers on her mom's fishing boat. They fished on Lake Huron in the state of Michigan. Lake Huron is one of the largest lakes in the world. It's one of the five Great

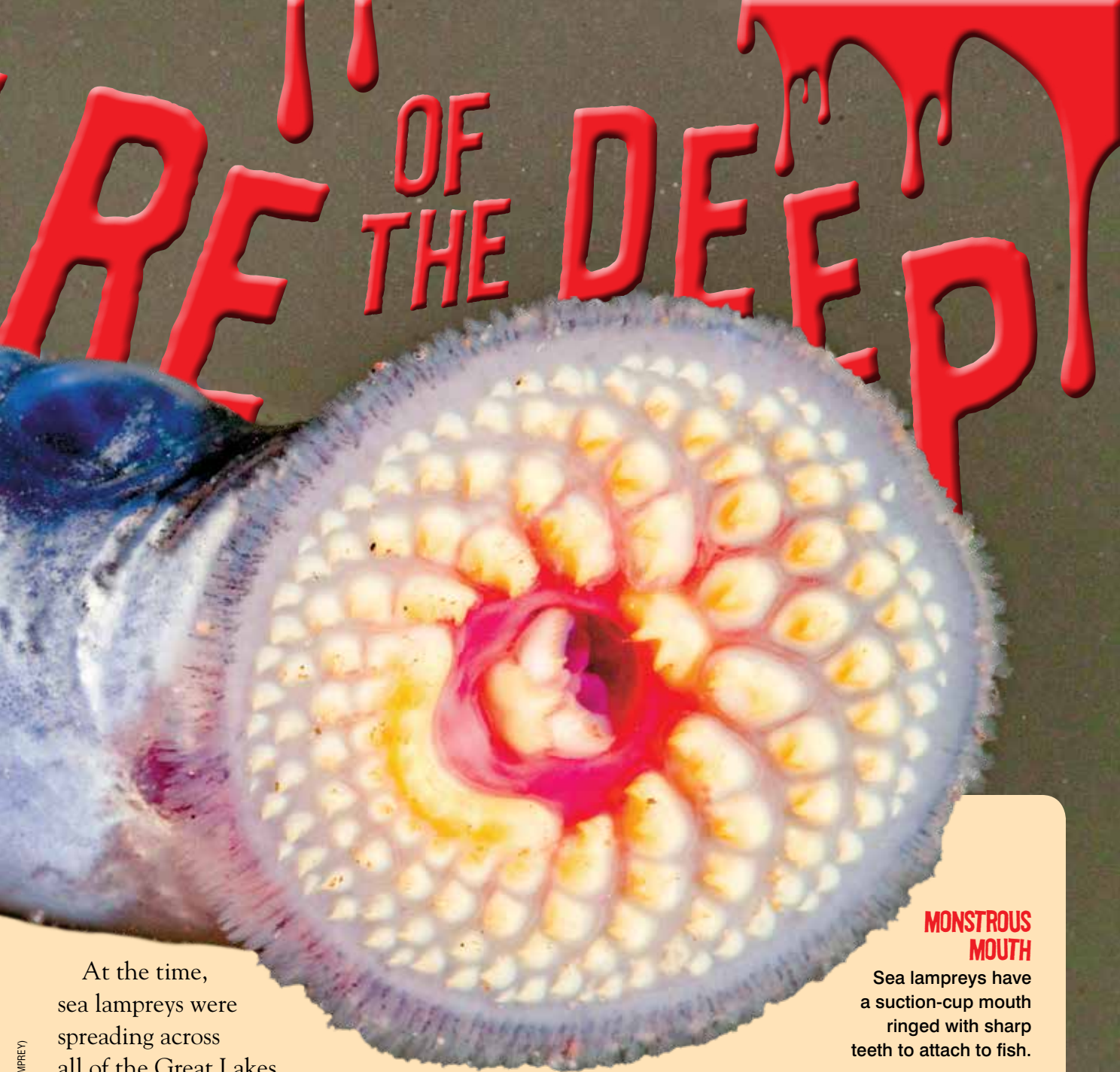
Lakes between Canada and the United States.

Beatrice's job was to get rid of the sea lampreys. That's a **species** of fish not naturally found in the Great Lakes. Like a vampire in a horror film, lampreys attach themselves to other fish. They drill a hole into the fish's flesh. They suck their blood. The creatures were killing the fish Beatrice's mom was trying to catch.



Beatrice Mertz

COURTESY OF BEATRICE SKAGGS (BEATRICE MERTZ)



SHUTTERSTOCK.COM (BLOOD); BUITEN-BEELD/ALAMY STOCK PHOTO (SEA LAMPREY)

RARE OF THE DEEP

At the time, sea lampreys were spreading across all of the Great Lakes.

Soon, these awful creatures would have a terrible effect on nature.

Could anything stop them?

THE ARRIVAL

Sea lampreys are naturally found along the Atlantic Ocean's coast. But the Great Lakes are far from the ocean.

So how did the sea lampreys get there? Scientists blame humans. That's often the

case with **invasive species**. These are plants or animals that are brought to a new place. Then they damage the species already living there. Many invasive species were brought to the U.S. as pets. Others arrived by mistake, hiding inside soil or boats.

Many scientists think that sea lampreys

MONSTROUS MOUTH

Sea lampreys have a suction-cup mouth ringed with sharp teeth to attach to fish.

WHAT DO YOU KNOW ABOUT INVASIVE SPECIES? TAKE OUR FUN ONLINE QUIZ BEFORE READING THIS STORY!

invaded the Great Lakes through the Erie Canal. This human-

made waterway was built between 1817 and 1825. It allowed boats to sail from New York all the way to the Great Lakes—in just 10 days. Before that, the trip would take weeks!

Suddenly, people and goods could move quickly and cheaply between the East Coast and the Midwest. Towns thrived along the canal. The new waterway opened the door to business. But it also opened the door to sea lampreys. The fish traveled from the ocean into Lake Ontario.

The Great Lakes are all connected like a giant river. The water from one lake flows into the other. From Lake Ontario, sea lampreys spread into Lake Erie. Then they swam into Lake Huron and Lake Michigan. Finally, they reached Lake Superior.

BLOODSUCKING MACHINES

In the Great Lakes, sea lampreys started an **ecological** disaster. The fish have **adapted** over millions of years to be skilled bloodsucking machines. The lamprey's mouth is like a toothy suction cup. It grips the skin of its victim and doesn't let go. Its tongue is like a sharp beak that cuts through fish skin. Lampreys even force special substances into their victims' bodies to keep their blood flowing.

In the ocean, sea lampreys aren't a problem. They attack large fish that can survive the blood sucking. And **predators** like swordfish keep their numbers down. But in the Great Lakes, the lampreys have no natural predators. The fish are smaller than those in the ocean. A lamprey attack



THE INVADER

Sea lampreys are naturally found in the Atlantic Ocean. Many scientists think the fish invaded the Great Lakes through a canal that connects the ocean with the lakes. In the Great Lakes, lampreys kill local fish by sucking up their blood.



often means death.

The number of sea lampreys in the Great Lakes rose quickly. They **decimated** fish like lake trout and lake whitefish. People who fished for a living, like Beatrice's mom, were the first to notice. More and more fish caught in nets had lampreys on them. Or they had bloody wounds—the sign of a lamprey attack.

“My mom just kind of accepted it,” Beatrice says. But fishing was at the heart of the Great Lakes business and way of life. Without fish, thousands of people would lose their jobs. They wouldn't have money to put food on the table.

Something needed to be done—fast.

STOPPING THE INVASION

Scientists quickly got to work. They tried shocking the bloodsucking fish with

electricity. They tried trapping them in nets. They even tried cooking them! Unfortunately, the lampreys' looks and smell turned diners off.

Meanwhile, scientists started testing poisons that could kill baby lampreys—without hurting other fish. As babies, lampreys live in rivers. Scientists hoped that the poison would kill baby lampreys before they swam from the rivers to the lakes.

Finally in 1956, after years of experiments, they identified a promising substance. The next year, they carefully

put it in a creek in Michigan.

The creek had been **infested** with lampreys. Within minutes, thousands of the creatures floated to the surface—dead.

It seemed like a solution had been found at last.

SEA LAMPREYS TODAY

Today, more than 4,000 invasive species live in the U.S. Sea lampreys are one of the few that scientists have been able to keep under control. The bloodsucking fish still swim in the Great Lakes. But their numbers are down 90 percent. (Don't worry, they don't attack humans!)

Scientists keep treating about 200 rivers a year to get rid of baby sea lampreys. They're also testing new ways to control the fish. One involves using a special smell to draw sea lampreys into traps.

This work has saved fishing in the Great Lakes. Today, this business brings in \$7 billion a year. It gives work to 75,000 people. "Without sea lamprey control, the Great Lakes **fishery** wouldn't exist as we know it," says a worker at the U.S. Fish and Wildlife Service.

What about Beatrice, who's 92 and has lived her whole life on the shores of Lake Huron? She's grateful that her beloved Great Lakes were saved from the sea lamprey invasion. But most of all, she's glad her days of beheading sea lampreys are over.

"Today, I wouldn't touch one!" she says with a laugh. ■

Turn
the page

to connect
this story with a
map about invasive species.

THE SOLUTION

Scientists once tried cooking sea lampreys as a way to control them. If they were tasty, people could fish them to sell as food!

Today, scientists use poison to kill baby sea lampreys (below).

