

Researchers try to save huge US salamander (Update)

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With a long, slimy body and beady eyes, North America's largest salamander wouldn't top any cutest animal lists. The hellbender's alien appearance and mysterious ways have earned the big amphibian a bad reputation and unflattering nicknames ranging from snot otter to devil dog.

But hellbenders, which can grow to over two feet (0.6 meters) long, are facing troubles bigger than an image problem. The aquatic creatures found only in swift-flowing, rocky rivers and streams are disappearing from large parts of the 16 states they inhabit.

The rare amphibians breathe almost entirely through their skin, making them a living barometer of water quality because of their sensitivity to silt and pollution, said Rod Williams, a Purdue University associate professor of herpetology who's tracked Indiana's hellbenders for nearly a decade.

"These are animals that live up to 30 years in the wild, so if you have populations declining, that alerts us that there could be a problem with the water quality," he said.

The U.S. Fish and Wildlife Service is conducting an assessment of the eastern hellbender—one of two subspecies—to determine if it should be added to the federal endangered species list. The other subspecies, the Ozark hellbender, found only in Missouri and Arkansas, was declared endangered in 2011 after a 75 percent decline.

Such a designation could free up federal money to protect their habitat and aid in their recovery.

Hellbenders —the origin of the name isn't known— have been present on this continent for at least 10 million years and are found in hill-county rivers and streams in the area stretching from New York to Missouri to North Carolina.

"There's nothing else like them in North America," said federal biologist Jeromy Applegate, who's leading the eastern hellbender assessment.

The wrinkly green and brown animals have a protective slimy coating and a flattened head to help them slide between rocks, a rudder-like tail to propel them through currents and stubby legs and fingers for gripping rocks.

Scientists aren't certain why the salamanders are disappearing. But dams have tamed some of the fast currents they prefer while sediment runoff from development has filled up the rocky nooks and crannies young hellbenders use for shelter. A fungus blamed for amphibian declines worldwide may also be a factor.

Researchers are urging landowners to plant trees and grasses along rivers to improve the water quality. They're also raising young hellbenders to be released into the wild to bolster the population.

The St. Louis Zoo, in collaboration with the Missouri Department of Conservation, is raising about 3,000 young Ozark hellbenders from eggs. That's more than twice the 1,200 Ozark hellbenders believed to still exist in the wild, said Trisha Crabill, a biologist with the U.S. Fish and Wildlife Service.

"It buys us time to figure out and address the threats," she said.

In Indiana, hellbenders once inhabited rivers and streams across much of the state's southern half but are now found only in the Blue River basin in heavily forested hill country along the Ohio River.

Recently, Rod Williams, the Purdue scientist who surveys hellbenders, and his students fanned out across the Blue River near the town of Corydon to look for the nocturnal creatures, which hide out during daytime beneath large flat stones.

Six hours passed before they hit pay-dirt—a feisty 21-inch (53-centimeter)-long, 1.25-pound (0.57-kilogram) hellbender that contorted and opened its mouth repeatedly as it struggled to escape. Two team members took a blood sample and collected some of its slimy coating—the trait that earned hellbenders the nickname "snot otter"—before inserting a microchip beneath its skin for future monitoring.

Williams' surveys have found adult hellbenders but no juveniles—the same worrisome trend seen in several other states.

Even in a few areas where hellbenders' numbers appear to be stable, some locals wrongly believe they are poisonous or feed on young trout, when in fact crayfish account for almost all of the hellbenders' diet. Anglers sometimes kill them on sight.

Wildlife officials are trying to educate the public about the harmless creatures.

"If nothing else, if people don't appreciate the animal for itself, that it has value to the world, then it can serve as a messenger," Crabill said. "It can tell us what's going on in the river."

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