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# Leapin' salamanders! NAU student research unveils mystery of amphibian's jump

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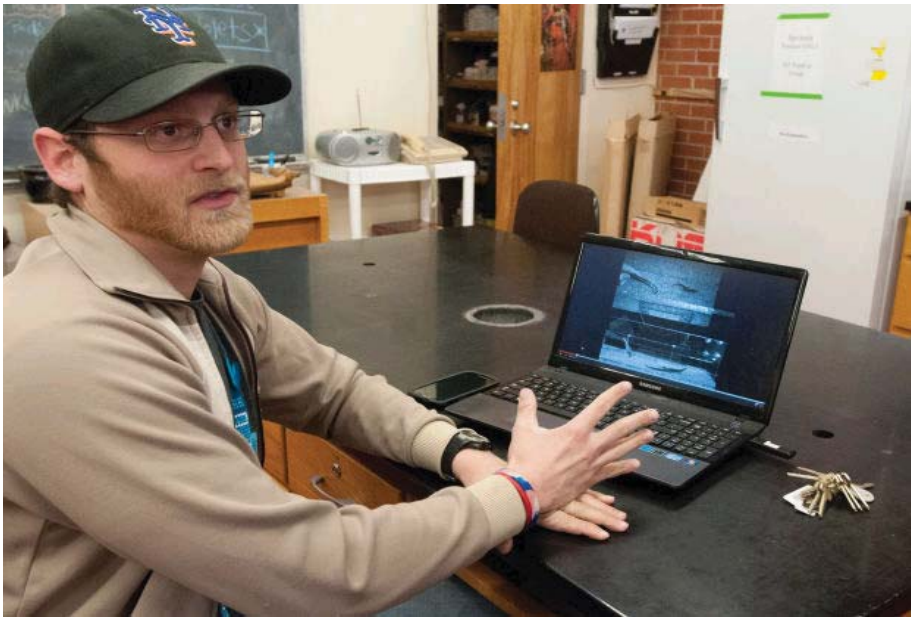
Amphibians and reptiles are having a tough time across the country and around the world.

In the United States alone, one in four is threatened with extinction.

Their plight has to do with their fragile bodies. Amphibians like frogs and salamanders absorb water through their skin. And as our waterways become more polluted, they ingest increasing levels of toxins.

The plight of seven Southwest amphibians and reptiles prompted the Center for Biological Diversity to threaten the federal government with a lawsuit this week demanding they examine their endangered status.



Anthony Hessel, a graduate student in biology at Northern Arizona University, reviews slow-motion footage he captured to study the way salamanders move and jump. (Taylor Mahoney/Arizona Daily Sun)

"Amphibians and reptiles really are amazing creatures," said Collette Adkins Giese, amphibian and reptile senior attorney at the Center for Biological Diversity.

"The ones found in Arizona have these amazing adaptations to deal with all the stresses that the environment provides."

Giese, a scientist and a lawyer, provided the federal government with extensive research about the amphibians for them to review. When it didn't hear back, the environmental group gave the U.S. Fish and Wildlife Service an official notice of intent to sue on Thursday if it doesn't hear back on its status review within 60 days.

Among the amphibians sought for protection is the Arizona toad, which lives along the Mogollon Rim south of Flagstaff and below. The toad produces steroids that make it unpalatable to predators and can even kill them. But it's threatened because it needs flowing water, similar to what once existed throughout most of its range before reservoirs altered Southwest canyons.

The Arizona toad now regularly breeds with another species, Woodhouse's toad, which does best in stillwater. The hybrid toad can better survive in its altered climate.

However, the native species has vanished from 75 percent of its historic habitat.

"This is a really cool creature that a lot of people haven't heard of or seen, but they're part of what makes Arizona unique and our heritage here," Giese said.

She says that protection under the Endangered Species Act brings additional attention to an animal, as well as scientific research and recovery plans.

"The Endangered Species Act has a nearly perfect record of stopping animals from going extinct — it's hands-down our best tool for saving rare amphibians and reptiles," she said.