

Despite frog-killing disease, researchers discover new frog species

September 24 2020, by Angela Nicoletti

Scientists have discovered a new species of rare frog that is rapidly disappearing. At the same time, they've also discovered hope.

An unstoppable wave of a deadly fungal disease has swept over every continent on earth, leading to mass die-offs of many frogs and amphibians. Harlequin frogs—the brightly-colored jewels of the tropics—have been one of the hardest hit. Critically endangered, several dozen [species](#) have vanished over the last three decades. Some are feared extinct.

Despite the devastating disease, a team of scientists working in Peru recently found a never-before-documented species of harlequin frog nestled in a valley on the eastern slopes of the Peruvian Andes. While these frogs can only be found in the Central and South America, they had never been spotted in this particular region before.

Alessandro Catenazzi, an FIU biologist in the Institute of Environment, was a part of the collaborative team who helped identify and describe the new species—*A. moropukaqumir*. The name is made up of a combination of different adjectives from Quechua, a language dating back to the Inca Empire that's disappearing almost as rapidly as the frogs. Moro means spots. Puka, red. Q'umir, green. The frogs are olive green, their bodies scattered with ruby red dots.

Catenazzi has worked in the cloud forests of southern Peru for nearly three decades—about 100 miles south of where the new species was

discovered. He's witnessed firsthand the effects of the fungal disease. At one time, he regularly saw two different, unique harlequin frog species while conducting his fieldwork. Unlike other amphibians, harlequin frogs are active during the day, and can be seen around streams and creeks. Their [bright colors](#) make them unmistakable, easy to find. Each time Catenazzi returned to the cloud forests, though, the frogs became harder to find. Eventually, they vanished—unseen for nearly 20 years now.

Catenazzi has also studied the cause behind the disappearances. The [fungal disease](#), called *Batrachochytrium dendrobatidis*, has led to waves of epizootics—similar to epidemics in humans—sweeping through the [cloud forests](#), and killing many frogs and amphibians.

The fungus thrives in temperatures that are not too hot and not too cold. It's found the perfect place that's just right in the forests harlequin frogs call home.

Not surprisingly, the newly discovered species has not escaped the disease. However, only 15 percent of the population was infected. This relatively low number shows that while the disease is present, current conditions don't point toward a more widespread outbreak or epizootic. And that's some much-needed good news.

For Catenazzi, the discovery renews the hope and possibility harlequin frogs can recover—and survive. He points out that it also comes on the heels of other recently re-discovered frog species, including some that were feared to have gone extinct. Long-term conservation efforts are credited with helping these animals rebound.

"It's taken many years for things to recover and, of course, not everything has recovered," Catenazzi said. "Everything that has reappeared—and every species that is discovered—is a cause for

celebration."

These causes for celebration and little glimmers of hope emphasize the importance of habitat conservation. Giving animals a place to live in the wild provides the best chance at survival, and helps prevent extinction, Catenazzi says.

Today, the area where the new frog species was found faces threats from human expansion. Surrounding forests are being cleared for agricultural use. But, now that the new harlequin frog species is known to live in this location, efforts to protect it can begin.

Speaking a disappearing language helps keep that language alive for future generations. Naming a new species isn't very different. In fact, it is where conservation truly starts—and what could help keep the little [frog](#) from extinction.

The findings were recently published in *Zootaxa*.

More information: Valia Herrera-Alva et al. A new species of *Atelopus* (Anura: Bufonidae) from southern Peru, *Zootaxa* (2020). [DOI: 10.11646/zootaxa.4853.3.4](https://doi.org/10.11646/zootaxa.4853.3.4)

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