

SCIENCE

Frogs That Escaped Extinction

Trilobites

By JOANNA KLEIN MAY 26, 2016

The Amazon gladiator frog is a fighter. But it could become a ghost. Extinction threatens 40 percent of amphibian species worldwide, and they are vanishing at alarming rates.

This March, Robin Moore, a photographer and amphibian conservationist, traveled to Panama to search for a single photo that would convey the gravity of the global extinction crisis threatening frogs, toads and other amphibians. After eight days of waiting for the right frog, at the right place and the right time, he captured that picture, which he titled, “The Vanishing.” Its single long exposure was designed to give the frog a ghostly appearance and communicate that amphibians are disappearing forever around the world.

Since 1980, more than 200 amphibian species have disappeared from the planet as a result of habitat loss, killer fungi, viruses, pollution, and the exacerbation of these threats from climate change. But in recent years some amphibian species that were thought to be lost have in a sense, emerged from the dead, leading scientists to study how they escaped extinction.

In 2010, Mr. Moore and his colleagues created a Top 10 Most Wanted poster for lost frogs and launched “The Search for Lost Frogs,” a campaign that took 100 scientists across 19 countries to find these Lazarus frogs. Its success led to a book, “In Search of Lost Frogs,” published in 2014. Since then, the journey has continued

and conservationists are working to establish ecotourism and nature reserves to protect the vital habitats where the lost frogs are found.

These are some of the stories behind Mr. Moore's quest to elevate these big-eyed species to the level of more charismatic species — like the ones “with eyelashes,” as he puts it.

Borneo Rainbow Toad

After this toad made Mr. Moore's Top 10 Most Wanted list in 2010, it took scientists eight months to find it in Malaysia's rain forest. They only had a scientific illustration of the toad, and didn't even know its color. But two researchers, Indraneil Das and Pui Yong Min, finally found it in 2011 at an elevation nearly 1,000 feet higher than its last sighting in 1914.

Variable Harlequin Frog

The poster child of lost frogs is the Variable Harlequin, which was rediscovered in Costa Rica in 2003 after chytrid fungus was thought to have decimated the population. By figuring out what allowed them to survive this plague, the species holds clues for solving the amphibian crisis.

This frog only lives in two populations within about 100 yards of one another along one stream in a remote private reserve in Costa Rica. Mr. Moore reached out to dozens of herpetologists who could not or would not reveal the frog's ultra specific location.

“Trying to find someone who could tell me where this was, was like trying to get into Fort Knox,” he said.

When he finally found a guide, there were no signs of the frog and humidity had disabled his camera. He was lucky that it started working again just at the moment he spotted the Variable Harlequin on a rock.

Long-Limbed Salamander

The Long-limbed Salamander was rediscovered in an area of a low-lying cloud forest in Guatemala in 2014, 40 years after it had last been seen. To get this shot, Mr. Moore traveled with two biologists, Paul Elias and Jeremy Jackson, retracing their footsteps by using their original 1970s field notes from when they first found the salamanders. Last year, international and local conservation groups established a new amphibian reserve for the rediscovered salamanders.

Seeking One Toad, Finding Another

Mr. Moore had no luck finding the Mesopotamia beaked toad (*Rhinella rostrata*), last seen in 1914 in the Choco forests of Colombia. But in the process, he stumbled upon this potentially new species of beaked toad. In 2010, this toad was named one of Time Magazine's top new species, and its comparison to Monty Burns, Homer's boss on "The Simpsons," brought it much attention.

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