

Amphibians in Decline Fund

In 2010, the U.S. Fish and Wildlife Service provided over \$350,000 in grants to preserve amphibians in decline worldwide. This is the story of the Lake Titicaca frog and the conservation projects supported by Wildlife Without Borders.



Lake Titicaca frogs for sale at a market.
Robert Elias, Denver Zoo

Deep in the azure waters of Lake Titicaca in Peru—the highest navigable lake in the world—lives a frog species that is disappearing at an alarming rate. Local fishermen are harvesting the Lake Titicaca frogs and selling them in nearby cities, where the frog is later skinned alive and blended in a beverage known as ‘frog juice.’ While locals think the beverage improves virility, they do not know that the fad consumption and decimation of these frogs threatens Lake Titicaca’s entire ecosystem.

“We must convince the fishermen, the sellers and the buyers that the extinction of this species will also decrease the lake’s fish population and threaten the livelihood of the local community,” said Meghan Rubinstein of the Denver Zoological Foundation, the organization driving the Lake Titicaca Frog conservation project. “Lake Titicaca is the epicenter of economic sustenance for cities surrounding the lake.”

With a \$25,000 grant from the U.S. Fish and Wildlife Service (USFWS) Wildlife Without Borders program, a team of amphibian conservationists will conduct biological and social surveys, and develop a social marketing campaign to change local attitudes and behaviors impacting the survival of the Lake Titicaca frog.

The Lake Titicaca Frog project is divided into two major components: biological and social. Biologists will use “mark and recapture” techniques to obtain a baseline population estimate, as well as look for ways to propagate the species in order to create a second “assurance” population to protect it from extinction. Denver Zoo will also partner with Peruvian organizations to develop ‘frog teams,’ which will work with local fishermen and talk about how frog tadpoles are an important food source for the fish they depend on for their livelihood. Without the frogs, there will be fewer fish and a significant impact to the Lake Titicaca ecosystem.

“We are working with a local university in Puno, Peru that will help us conduct research on how we should develop conservation messages and ultimately change behavior,” said Rubinstein. “The local fishermen are a tight-knit community. We have also found organizations that already work with them, which will ensure the fishermen’s trust and participation in the conservation of this species.”

The Lake Titicaca Frog project team is looking for additional evidence of the frog’s population decline. Rubinstein said that amphibians are an ‘indicator species’ – if something is wrong with the frog, then there is usually something wrong with its habitat. They will be conducting a biological diversity survey and also test the frogs for the presence of *Batrachochytrium dendrobatidis*, known as chytrid, a fungus that is devastating amphibian populations worldwide.

“Research cannot be done in a vacuum if you want to make an impact on conservation,” said Rubinstein. “All environmental and social factors must be considered, which takes time and money. We are very grateful for the support we have received from the USFWS. Without it, our project wouldn’t be possible.”

The USFWS’ Amphibians in Decline Fund awarded 13 grants in 2010 to amphibian projects in Colombia, Ecuador, Panama and Mexico, to name a few. While the USFWS funded over \$350,000 worth of actions, it leveraged nearly \$800,000 in matching funds to support these projects.

“These grants will make promising headway towards conservation and maintaining biodiversity,” said Jenny Martinez, International Program Specialist for the USFWS Wildlife Without Borders-Latin America and the Caribbean program. “It’s gratifying to see how a relatively small amount of funding can help the local community address the problem directly, and how many organizations become involved in finding a solution.”