

Tarahumara Frogs Reintroduced to Arizona

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At first glance, it looked like most other smuggling operations along the border: a line of human figures, dimly seen in the first light of dawn, carrying backpacks along a rugged mountain trail. But in this case, the smugglers were carrying a treasure back to its rightful place. They were also packing an arsenal of permits, and many were government agents. After being lost from the U.S. for 21 years, *Rana tarahumarae* was carried back to the wilds of Arizona.

On June 26, four hundred Tarahumara frogs and tadpoles (T-frogs) were carefully transported to a remote canyon in the Santa Rita Mountains southeast of Tucson. They were released in three locations along a single perennial stream

many forces against reintroducing extirpated species into the wild, it's a miracle this ever got so far. Many of these people have devoted their lives to managing species and their habitat or researching what is threatening wildlife without being able to do anything about it. You could judge the importance of the moment by seeing the joy and reverence on their faces as they simply stared at a pool full of frogs.

Non-invasive monitoring of the reintroduced frog population started immediately and will be ongoing for

years to come. We know the region's copper smelters – primary suspects in the T-frog extirpation – have shut down or cleaned up their emissions. But already, the predators are taking a heavy toll. Next, the frogs will have to learn how to



Figure 1. Tarahumara Frog (*Rana tarahumarae*). Photo by Stephen Hale.

where the last native population disappeared in 1983.

This was achieved by a cooperative effort from a variety of groups. Primary credit must go to members of the Tarahumara Frog Conservation Team, who for 13 years have been quietly slogging their way through the pools of paperwork and red tape imposed by the reintroduction process. Another enormous task was rearing several generations of T-frogs in captivity, expertly carried out for the last three years by the Arizona-Sonora Desert Museum, two National Wildlife Refuges, and several individuals. Also involved were volunteers and staff from Arizona Game & Fish Department, U.S. Fish & Wildlife Service, U.S. Forest Service, U.S. Geological Survey, University of Arizona, the Tucson Herpetological Society, the Nature Conservancy and Sierra Club.

The Tucson Herpetological Society played a significant role, as many of the individuals involved are THS members. Also, many of us wrote letters to a reluctant Arizona Game and Fish Commission voicing our support for the reintroduction at a crucial point a few years ago.

This event would not have happened without a lot of devotion from a lot of great people. With so

survive flash floods, winter cold, and ultimately, disease. Mortalities will be studied and additional frogs will be released. There is a very real chance the frogs will not survive the current epidemic of amphibian disease plaguing ranid frogs in Arizona unless we can learn how to help.

The Tucson Herpetological Society will keep its members up-to-date on the status of the frogs. A lot of people interested in amphibians have waited a long time to see and photograph a T-frog in the wild. Unfortunately, that time has not yet come. The best thing we can do now to help these frogs survive is to leave them alone. Ranid frogs are especially prone to stress if handled. Amphibian diseases like chytrid fungus can become fatal when their host is stressed; in the case of T-frogs sometimes killing a frog less than 12 hours after the frog was handled. Netting a frog and posing it for a photo could be all it takes to push it over the edge.

With a lot of luck, this population might grow to a robust size so the reintroduction can expand into other canyons they formerly occupied. The THS will support this goal so all of us can once again encounter Tarahumara Frogs in the mountains of southern Arizona.

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