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## Panama Amphibian Rescue and Conservation Project

### Regional Focus

North and Central America, and  
the Caribbean

#### INSIDE

News from the ASG

Regional Updates

Global Focus

Recent Publications

General Announcements

And More...

Golden frogs for sale at the El Valle Market



Amphibian Red  
List Internship  
Available



Protecting Rare  
Amphibians Under  
the U.S. Endangered  
Species Act

# Protecting Rare Amphibians Under the U.S. Endangered Species Act

By Collette L. Adkins Giese

Frogs, salamanders and other amphibians are some of the most rapidly disappearing species on Earth. Every day, species here in the United States are beset by habitat destruction, pollution, toxins, climate change and other factors that drive extinction.

Surprisingly, though, just 23 of the nearly 1,400 species protected under the U.S. Endangered Species Act are amphibians. That's partly because they've been woefully underrepresented when it comes to wildlife protection efforts by environmental organizations in the United States. The Center for Biological Diversity aims to change that.

Almost since its inception two decades ago, the Center has worked to protect endangered amphibians. By petitioning the U.S. Fish and Wildlife Service to provide Endangered Species Act protection for imperiled amphibians – and following up with lawsuits when necessary – the Center is working to obtain federal safeguards and protected habitat for frogs, toads and salamanders across the country. And after hiring the nation's first full-time attorney dedicated to conserving amphibians and reptiles, the Center is expanding its work on behalf of rare amphibians. But there isn't much time to lose.

## A POWERFUL TOOL

In the United States, 56 species of amphibians (more than 20 percent of those evaluated) are endangered or vulnerable to extinction, according to the 2011 Red List of the International Union for Conservation of Nature (IUCN). Moreover, scientists lack sufficient information to assess the status of an additional five percent of the nation's amphibians (1).

The good news is that the United States has one of the world's most powerful and successful legal tools for protecting species at risk of extinction: the Endangered Species Act (ESA). Passed by Congress in 1973, the ESA is the best and possibly the last chance Americans have to secure a future for diverse native wildlife and the natural environments they depend on.



The purpose of the ESA is to prevent the extinction of the most at-risk plants and animals, increase their numbers, spur their full recovery and, eventually, their removal from the endangered list. Two elements give the ESA its “teeth”: the citizen-suit provision allows public-interest groups and individuals to petition and sue the government to make sure the Act protects species as it was intended to, while the “critical habitat” provision provides a crucial tool for protecting the lands and waters that species need to survive and recover.

The ESA is, by any measure, a success: 99.9 percent of species protected by the Act have been kept from extinction and, where measured, 93 percent of protected species are stable or moving toward recovery (2, 3). The longer a species is listed under the Act, the more likely it is to be recovering (4).

## MORE PROTECTIONS NEEDED

Currently, just six frogs, four toads and 13 salamanders are protected in the United States under the ESA. Yet dozens more urgently need federal protection but do not currently receive it, such as the Foothill yellow-legged frog (*Rana boylei*), Black toad (*Anaxyrus exsul*), and the Inyo mountain salamander (*Batrachoseps camp*). In fact, 41 species lack protection under the ESA even though they are considered endangered or vulnerable to extinction by the IUCN. The Center (which has helped secure ESA protections for more than 500 plants and animals over the last 20 years) is working to secure ESA protection for these amphibians through petitions, lawsuits and negotiations.

California tiger salamander (*Ambystoma californiense*).  
Photo: U.S. Fish and Wildlife Service.



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Last year, the Center struck a historic legal settlement with the U.S. Fish and Wildlife Service requiring the agency to decide whether to add 757 imperiled plants and animals — including more than 30 amphibian species — to the endangered species list by 2017. The settlement caps a decade-long effort by the Center’s scientists, attorneys and activists to secure federal help for some of the country’s least protected, but most imperiled, species.

The agreement has already yielded important results. The Service recently found that protection of 374 freshwater species in 12 southeastern states — including 13 species of amphibians — may be warranted under the ESA (The Center and other groups petitioned to protect those species in 2010). As a result, the Neuse river waterdog (*Necturus lewisi*), Gulf hammock dwarf siren (*Pseudobranchius striatus lustricolus*), One-toed amphiuma (*Amphiuma pholeter*) and 10 other salamander species will move closer to ESA protection. The Center’s petition to list a population of the Boreal toad (*Anaxyrus boreas boreas*) — whose numbers plummeted from disease and habitat destruction — received a positive initial finding from the Service in April with a final listing decision expected next year.

Looking forward, the Center plans to file a large-scale petition this year seeking ESA protection for nearly 50 species of amphibians and reptiles across the United States. The status of these species was initially evaluated using information from NatureServe Explorer, the IUCN Red List, AmphibiaWeb and scientific journals. The Center is now seeking additional guidance from the scientific community on species that should be included in this listing petition.

### SAVING HABITAT

Beyond including additional amphibians on the list of endangered and threatened species, the Center also seeks to reduce threats to those species already on the list. Habitat destruction is a primary threat to endangered amphibians, and as such, protection of critical habitat is literally critical. In fact, a study by the Center found that species with this federally protected habitat are more than twice as likely to be moving toward recovery than species without it (4). Strictly defined, critical habitat includes specific areas within a species’ current range that have “physical or biological features essential to the conservation of the species,” as well as areas out-

side the species’ current range upon a determination “that such areas are essential for the conservation of the species.” 16 U.S.C. § 1532(5)(A).

Critical habitat provides key protections for listed species by prohibiting federal agencies from permitting, funding or carrying out actions that “adversely modify” designated areas. Designating critical habitat also provides vital information to local governments and citizens about where important habitat for endangered species is located — and why they should help conserve it.

The Center works to ensure that the U.S. Fish and Wildlife Service designates critical habitat for listed species. For example, after

the agency refused to designate any critical habitat for the Sonoma County population of the California tiger salamander (*Ambystoma californiense*), the Center brought a lawsuit arguing that this decision was based on undue political influence rather than the best available science, as the ESA requires. These efforts paid off last year when the agency finally designated more than 47,000 acres of critical habitat for the Sonoma County salamanders.

The Center also works to prevent destruction of essential amphibian habitats, such as the last vi-

able breeding pond for the highly endangered Mississippi gopher frog (*Rana capito sevosa*). A private developer in Mississippi is building a town called “Tradition” with as many as 35,000 people on land near the pond. In response to the threat of litigation under the ESA, the developer began discussing with the Center how the development project could proceed while still protecting the frog. Since then, the Center and its local partner negotiated a memorandum of understanding with the developer that outlines steps the parties will take to facilitate a proposed land exchange between the developer and the U.S. Forest Service that would keep development away from the essential habitat.

The Center’s campaign against stocking of nonnative fish provides another example of its efforts to protect amphibian habitats. Nonnative trout stocking is causing amphibian declines in California and throughout the western United States, with introduced fish preying upon amphibians like the mountain Yellow-legged frog (*Rana muscosa*), Yosemite toad (*Anaxyrus canorus*), and Arroyo toad



Juvenile Boreal toad (*Anaxyrus boreas boreas*). Photo: J.N. Stuart.

(*Bufo californicus*). Litigation brought by the Center against California Department of Fish and Game forced the agency to consider the impacts of trout stocking on amphibians, which resulted in many lakes being made off limits to nonnative fish stocking.

## PROTECTION FROM PESTICIDES

Pesticides pose another significant threat to endangered amphibians, which are particularly sensitive to pesticides and other toxins because of their permeable skin. To address this threat to amphibians and other wildlife, the Center has brought a series of lawsuits against the U.S. Environmental Protection Agency (EPA), which is tasked with ensuring that pesticide registrations do not pose unreasonable adverse effects on the environment. Unfortunately, the EPA registers most pesticides without fully analyzing the impacts on endangered and threatened species.

In 2011, the Center filed a legal complaint challenging the EPA's failure to consult with the U.S. Fish and Wildlife Service on pesticides' harmful effects on endangered and threatened species, including 16 amphibian species. This is a landmark case—the largest of its kind—and it seeks to protect more than 200 species from the harmful effects of approximately 400 pesticides. Last year the Center also filed a complaint against the U.S. Fish and Wildlife Service and the EPA for failing to study and act on threats posed by pesticides to the threatened California red-legged frog (*Rana draytonii*).

Atrazine is a pesticide with particularly harmful effects on amphibians. Atrazine is an endocrine disruptor that chemically castrates and feminizes male frogs—even when it's used at levels lower than those currently allowed in drinking water by the EPA (5). Its danger to humans and wildlife is so serious that it was banned in the European Union in 2004. Yet it's the most commonly used herbicide in the entire United States. The Center and its allies have been pushing the EPA to ban atrazine in the United States. The Center also supports legislative efforts to ban atrazine; a bill was introduced earlier this year.



Mississippi gopher frog (*Rana capito sevosa*). Photo: U.S. Fish and Wildlife Service.

## MORE WORK AHEAD

Efforts by the Center for Biological Diversity and other organizations are urgently needed because the United States is experiencing amphibian declines symptomatic of the global amphibian extinction crisis. Ubiquitous toxins, global warming, nonnative predators, over collection, habitat destruction and disease are key factors leading to the demise of amphibians in the United States and across the globe.

The Center uses biological data, legal expertise and the citizen petition provision of the powerful Endangered Species Act to obtain legally binding protections for rare amphibians and other wildlife across the country. But stemming the amphibian extinction crisis means attacking it on every front. The nation needs conservation efforts as diverse as the animals we're working to protect.

## References

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