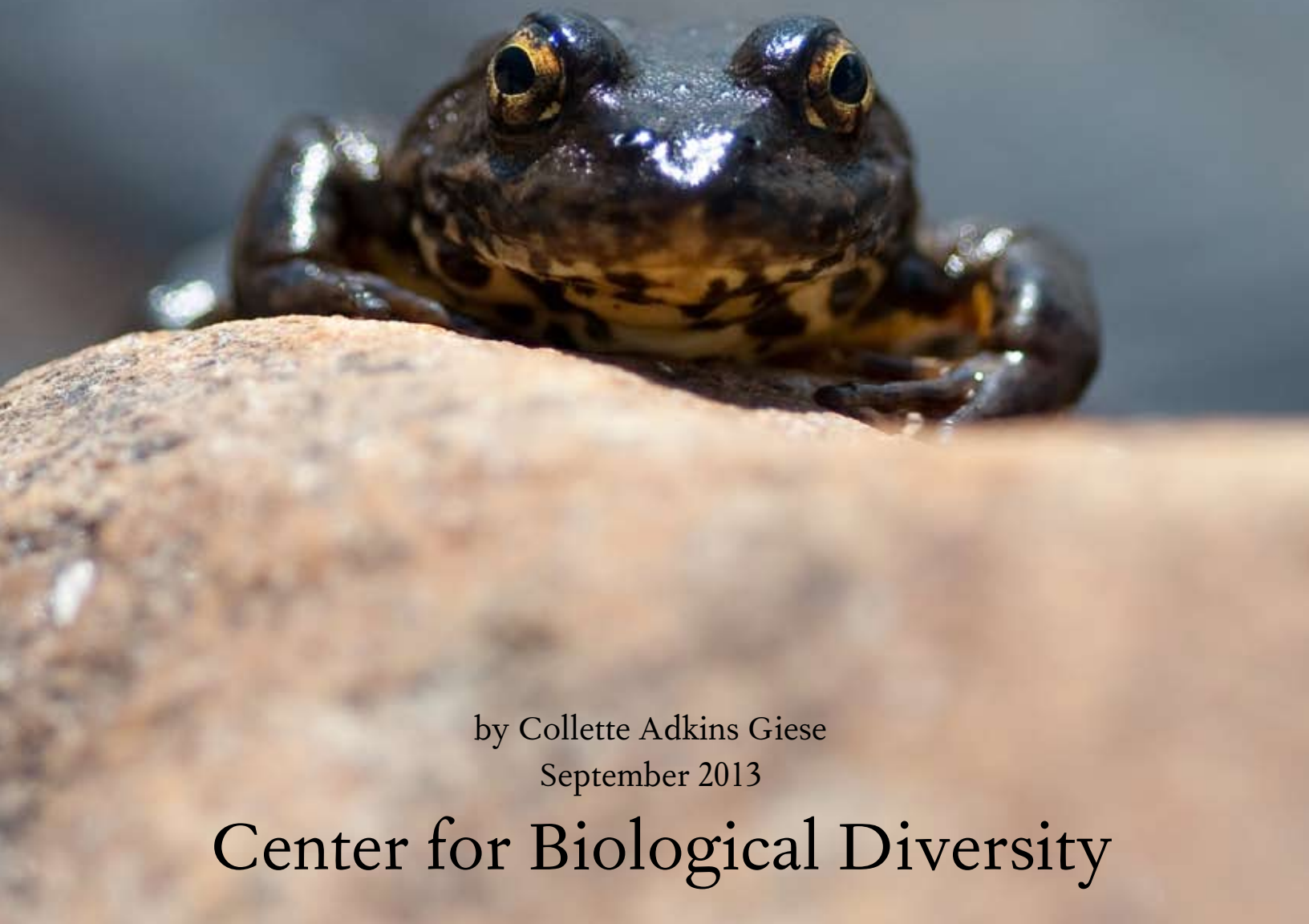


# Dying for Protection:

The 10 Most Vulnerable, Least Protected  
Amphibians and Reptiles in the United States



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## Introduction

**T**he Earth is facing the largest mass extinction in 65 million years. Current global extinction rates are estimated to be 1,000 to 10,000 times higher than those in the fossil record. Amphibians and reptiles are some of the most imperiled animals of all, with widespread population declines occurring in the United States and globally. According to the International Union for the Conservation of Nature, one in four U.S. amphibians and reptiles is endangered or vulnerable to extinction.

The loss of amphibians and reptiles is a troubling consequence of unacceptable environmental degradation. Specialized habitat needs make amphibians and reptiles vulnerable to habitat destruction from urbanization, agriculture, logging, mining and other causes. Amphibians are particularly sensitive to pollution because their permeable skins absorb toxins easily. Global warming, nonnative predators, overcollection and disease are other key factors leading to their decline.

Amphibians and reptiles play important roles in their ecosystems. Some serve as predators that keep prey numbers in check, such as snakes that eat mice and other rodents. Others are prey, including frogs that serve as a food source for many species of birds, fish, mammals and reptiles. Amphibians are important in the control of insect pests such as mosquitoes; the presence of lizards and snakes even helps reduce exposure of Lyme disease to humans. And of course, amphibians and reptiles are important components of our natural heritage — these irreplaceable animals help make the world a more fascinating place to live.

To bring attention to this extinction crisis, the Center has released a list of 10 U.S. amphibian and reptile species that will face extinction if not granted the protection of the Endangered Species Act. The Act has prevented extinction for 99.9 percent of the species it covers and is clearly the best tool to save these rare amphibians and reptiles.

The 10 species represent a range of geography and suffer from a diversity of threats.

## Sierra Nevada Yellow-legged Frog

**Y**ellow-legged frogs throughout the Sierra Nevada are on the brink of extinction, experiencing sharp population declines due to introduced fish, pesticides, killer diseases and habitat loss. Their populations have declined by about 90 percent.

To address these threats, the Center petitioned to protect mountain yellow-legged frogs in the Sierra Nevada in 2000. In response to our subsequent litigation, the U.S. Fish and Wildlife Service added these frogs to the candidate list in 2003, finding that they warranted protection but that listing was precluded by higher-priority species. A southern population of the mountain yellow-legged frog found in the Transverse Ranges of Southern California has been listed as an endangered species since 2002.

After the frogs had waited more than a decade for protection, in April the Fish and Wildlife Service finally proposed to separately list Sierra Nevada yellow-legged frogs (*Rana sierrae*) and the northern “distinct population segment” of mountain yellow-legged frogs (*Rana muscosa*), recognizing a recent taxonomic split of the species. The Service also proposed to designate more than a million acres of critical habitat essential for the protection and recovery of the Sierra Nevada yellow-legged frog. These proposed protections are the result of a 2011 agreement between the Center and the Service to speed



up endangered species protection decisions for 757 imperiled animals and plants around the country.

In response to the Service’s listing proposal, anti-environmental politicians, Tea Party groups and others who oppose state and federal regulations are denouncing any efforts to protect these rare amphibians. By engaging our membership and garnering public support through the media, the Center is helping send thousands of comments supportive of the proposed protections to the Service. This strong showing of public support should help ensure that the Service goes forward with the proposed protections based on the scientific evidence rather than bow to political pressure from anti-conservation forces.



## Eastern Hellbender

**A**ncient animals that have changed very little over time, hellbenders are uniquely adapted to aquatic life. They have paddle-like tails for swimming and flattened bodies and heads that fit in crevices and allow them to cling to river bottoms. Numerous folds of skin on their sides allow increased oxygen absorption from the water. Hellbenders are North America’s largest amphibian and can grow to be 2 feet long. They largely rely on vibrations and scents for communication and foraging; they secrete toxic slime to ward off predators but are not poisonous to humans. Hellbenders forage at night, preying

on crayfish, insects, dead fish and other amphibians, and are in turn eaten by fish, turtles and snakes.

Hellbenders are known by a number of colorful common names, including alligator of the mountains, big water lizards, devil dog, mud devil, walking catfish, water dog and snot otter. The eastern hellbender is one of two hellbender subspecies. The other, the Ozark hellbender, is found in streams in northern Arkansas and southern Missouri and was protected under the Endangered Species Act in 2011.

The hellbender is threatened with extinction due to water pollution and dams. Pollution associated with mountaintop-removal coal mining, for example, contaminates streams where hellbenders live. Though the eastern hellbender was once found across most of the eastern United States, we don't know in how many states it still survives. States in its range include New York, Pennsylvania, Maryland, Ohio, Illinois, Indiana, Virginia, West Virginia, Kentucky, Tennessee, the Carolinas, Georgia, Alabama and Mississippi.

In 2010 the Center petitioned the Service to provide Endangered Species Act protection for the hellbender and hundreds of other freshwater species found in the Southeast. Then, in June 2013, to speed urgently needed protections for the eastern hellbender, the Center filed a lawsuit against the U.S. Fish and Wildlife Service. The hellbender is one of 10 species across the country that the Center is prioritizing for Endangered Species Act protection this year. Under a landmark settlement agreement with the Service that speeds protection decisions for 757 species, the Center can push forward 10 listing decisions per year.

## Florida Keys Mole Skink

The mole skink is a tiny, colorful lizard found mainly along the sandy shoreline of Dry Tortugas and the Lower Keys; it may also occur among other Florida Keys. It was once locally common, but its population has declined up to 30 percent, and the lizard is now considered rare. It is precariously dependent on suitable sandy shoreline habitat that is increasingly threatened by development and sea-level rise. It burrows in loose soils and uses stones and driftwood for cover.

The Florida Keys mole skink could go extinct due to rising sea levels from global climate change. Many parts of Florida are threatened by the effects of climate change, which include more frequent droughts, groundwater depletion and rising sea levels. Scientists



predict that a sea-level rise of 3 to 6 feet is highly likely in the state within this century.

In 2010 the Center petitioned for protection for the mole skink, along with 404 other Southeast species, and the Fish and Wildlife Service found that listing may be warranted but failed to make a decision on listing within one year, as the Endangered Species Act requires. The Florida Keys mole skink is one of 10 species that the Center is prioritizing for a protection decision through its work with the Fish and Wildlife Service.

## Dunes Sagebrush Lizard

The dunes sagebrush lizard is a small, brown lizard that buries itself in sand to avoid predators and regulate its body temperature. Considered one of the nation's most imperiled lizards, it has a very small and increasingly fragmented range in southeastern New Mexico and west Texas, where it is threatened by ongoing oil and gas drilling and herbi-



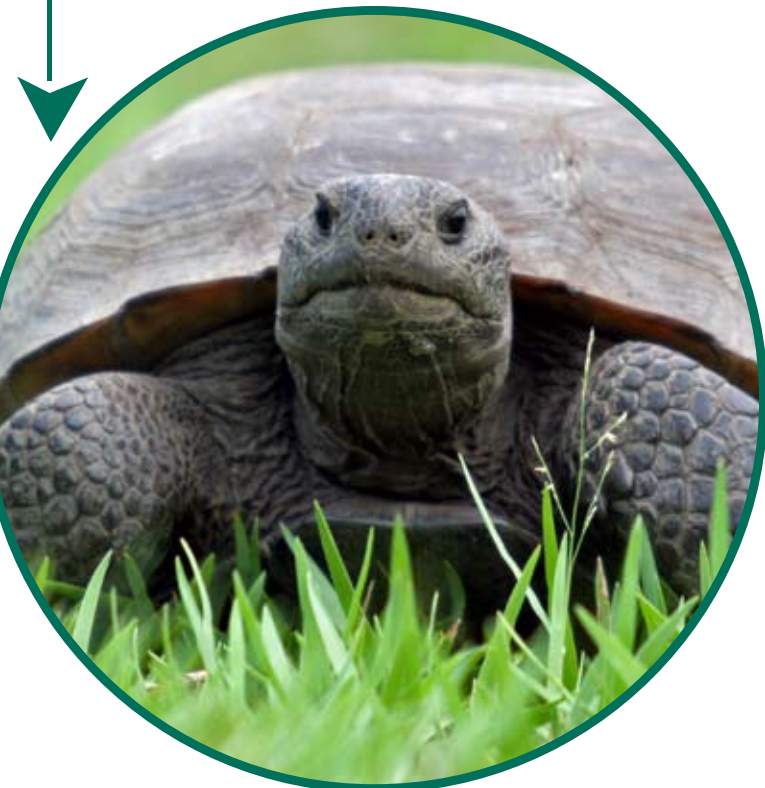
cide spraying for livestock grazing.

After the lizard spent nearly 30 years as a candidate for endangered species protection, in 2010 the Service proposed to protect the lizard as endangered. But 18 months later the Service withdrew the proposal, citing a conservation agreement with Texas as a reason.

In June the Center for Biological Diversity and Defenders of Wildlife filed a lawsuit challenging that decision under the Endangered Species Act. The Fish and Wildlife Service is risking the species' future by relying on a voluntary state conservation plan in which Texas maintains that individual agreements with landowners to conserve the lizards' habitat cannot be made available for review by the federal agency or the public. Moreover, administration of the agreements is overseen by the very oil and gas executives who benefit financially from destruction of the lizard's habitat.

## Eastern Gopher Tortoise

Once widespread across the Southeast, the gopher tortoise now persists only in small, isolated populations. Gopher tortoises, which can live to be more than 50 years old, build elaborate burrows that provide habitat for more than 360 other species, including rabbits, quail, owls, frogs and snakes. The majority of the tortoises' preferred lon-



gleaf pine habitat has been lost to pine plantations and suburban sprawl.

Gopher tortoises are also threatened by rattlesnake hunters who destroy tortoise burrows while looking for snakes. "Rattlesnake round-ups" — contests in which hunters catch as many snakes as they can — are a known threat to gopher tortoise burrows. Florida no longer has rattlesnake roundups, but there are still roundups in Georgia and Alabama, which the Center is working to transform into wildlife-friendly festivals.

The western population of the gopher tortoise in Louisiana, Mississippi and west of the Mobile and Tombigbee rivers in Alabama has been protected under the Endangered Species Act since 1987. The eastern population of the tortoise was petitioned for protection in 2006 by Save Our Big Scrub and Wild South. In 2011 the U.S. Fish and Wildlife Service found that the eastern gopher tortoise warranted protection under the Endangered Species Act. Rather than being protected, however, it was added to a list of candidate species to await federal protection.

## Boreal Toad

Once widely distributed and common in the western United States, boreal toad populations have plummeted over the past few decades. The boreal toad is rare across its range and is entirely absent from numerous areas where it occurred historically; the only remaining large population in the Southern Rockies occurs in Colorado. Boreal toads were nearly extirpated in southern Wyoming and were likely extirpated in New Mexico prior to a recent reintroduction effort. Boreal toads exist in less than 1 percent of their historic breeding areas in the southern Rockies, where a globally occurring amphibian disease known as chytrid fungus has wiped out most remaining populations.



To gain federal protection for these highly imperiled toads, the Center, Rocky Mountain Wild (formerly Center for Native Ecosystems) and Biodiversity Conservation Alliance filed an Endangered Species Act petition in May 2011. In 2012 the Fish and Wildlife Service found that listing may be warranted and initiated a full status review for boreal toads in the southern Rocky Mountains, Utah, southern Idaho and northeastern Nevada. A final listing decision due on May 25, 2012 has not been made, and the Center has filed a lawsuit to speed protections for the toad.

Endangered Species Act protection for the toad will likely increase federal funding for research to stem chytrid fungus and help save high-elevation stream and wetland habitat from threats like pollution and poorly managed recreation and livestock grazing.

## Blanding's Turtle

**T**he Blanding's turtle is a medium-to-large turtle targeted by the pet trade because of its beautiful yellow chin and throat. It once ranged through much of the Great Lakes region and the northeastern United States, but the only remaining large populations are found in Minnesota and Nebraska. Blanding's turtles have suffered extensive slow declines from habitat loss, road mortality and intense predation on eggs and hatchlings.

Another threat to the Blanding's turtle is "turtle derbies," where wild turtles are caught and raced as part of small-town summer celebrations. At these races turtles risk unnecessary exposure to disease, which can be spread to wild populations when turtles are released. For example, by bringing a number of

turtles into close proximity, the race could potentially spread an emerging infectious disease called ranavirus that is killing turtles, salamanders and frogs in the eastern United States.

In March 2013 the Blanding's turtle and two other U.S. turtle species received

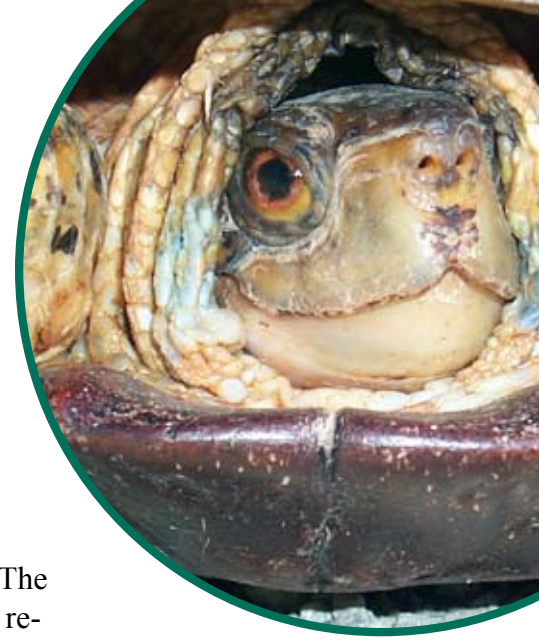
protection under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which should help curb over-exploitation of the freshwater turtles for Asian food and medicinal markets. The protections came in response to a 2011 petition from the Center, which documented the harmful effect of international trade on the turtles.

Despite the significant threats and declining populations, the Blanding's turtle has not received protection under the Endangered Species Act. In 2012 the Center and several renowned scientists and herpetologists, including E.O. Wilson and Thomas Lovejoy, filed a formal petition seeking Endangered Species Act protection for the Blanding's turtle and 52 other of the nation's most threatened amphibians and reptiles. The petition — the largest ever filed focusing only on amphibians and reptiles — asked the U.S. Fish and Wildlife Service to protect six turtles, seven snakes, two toads, four frogs, 10 lizards and 24 salamanders under the Act.

## Western Pond Turtle

**W**estern pond turtles are large, opportunistic turtles that will consume almost anything they can catch. The name "pond" turtle is something of a misnomer because this species more frequently lives in streams and rivers and spends a lot of time in terrestrial habitats.

Once known from western Washington south to northwestern Baja California, the turtle's populations are now declining and scattered. In Washington the turtle has been essentially extirpated from historic habitat in the lower Puget Sound, and only two populations remain in the Columbia River Gorge. In Oregon's Willamette Valley, western pond turtles appear to have declined to a level that represents roughly 1 percent of the number of turtles that used to live there. The turtle's California populations are in



rapid decline, with most remaining populations small and barely viable.

Numerous forces are responsible for the turtle's declines. An upper-respiratory disease epidemic in Washington in 1990 left a population of fewer than 100 western pond turtles in the wild. Contamination of the animal's aquatic habitats from runoff is also a problem. Western pond turtle eggs tested in Oregon contained low concentrations of organochlorine pesticides and PCBs, along with the heavy metals mercury and chromium. Once widely utilized for food, the turtle still suffers from illegal collection for the pet trade.

Yet habitat destruction is the primary driver of the declines. Extensive draining of wetlands and other habitat alteration in the past 100 years has left few aquatic areas in the Central Valley of California. And massive water-development projects have changed the location, flow and use of water across most of the turtle's range. The western pond turtle has special status under state law within its entire native range but these laws do not adequately protect the turtle's habitat.

If it receives protection under the Endangered Species Act, the western pond turtle will benefit from greater emphasis on protecting its habitats and development of a recovery plan. That's why the Center pursued the turtle's protection in our 2012 petition focused on amphibians and reptiles.

## Louisiana Pine Snake

**T**he Louisiana pine snake is a large, powerful constricting snake that depends on pocket gophers as a primary food source and to make burrows that the snakes use for cover. This beautiful snake is buff to yellowish in background color, with russet-colored blotches covering its back. Its body markings are always conspicuously different at opposite ends of its body.

The loss of longleaf pine ecosystems in the Southeast is the primary driver of the decline of the Louisiana pine snake, as well as dozens of other species. The snake requires open pine forests with enough sun to allow growth of abundant grasses and non-woody plants. In the absence of fire, suitable Louisiana pine snake conditions are lost due to vegetation succession.

While the snake historically occurred in longleaf forests west of the Mississippi River in Louisiana



and Texas, it is nearly extinct in the wild. It is likely already extinct in Texas and fewer than 100 probably remain in Louisiana. Unless the snake receives urgently needed protections, scientists predict it will likely go extinct in the wild within a decade.

Fortunately the snake is scheduled to receive Endangered Species Act protection by 2014 under the Center's settlement with the Service that is leading to listing decisions for hundreds of candidate species awaiting federal protection. Once added to the endangered list, the Louisiana pine snake will finally receive protections, including a recovery plan, to ensure its survival.

## Peaks of Otter Salamander

**K**nown only to a 12-mile stretch of Virginia's Blue Ridge Mountains, Peaks of Otter salamanders have one of the most restricted ranges of any salamander in the United States. These intriguing, 5-inch-long salamanders are lungless and require moist skin for gas exchange. Never moving much more than a few feet from their underground retreats, they are active at night, foraging for invertebrate prey on leaf litter damp from recent rainfalls.

The salamanders occur only in mature oak and maple forests at high elevations, a trait that makes

them particularly vulnerable to climate change. Because Peaks of Otter salamanders are confined to a single ridge top, they are unable to shift their range upslope as the climate warms. While the habitat of these salamanders is offered some protection in the Jefferson National Forest and on the Blue Ridge Parkway, activities like logging continue to threaten their survival. The species could be driven to extinction if habitat destruction continues to cause population declines and fragmentation across its small range.

The Peaks of Otter salamander is one of 24 salamanders included in the Center's 2012 petition seeking Endangered Species Act protection for the nation's most vulnerable amphibians and reptiles. Listing under the Endangered Species Act would ensure that the salamander's habitat is fully protected from the intensive timbering and habitat fragmentation that are hurting the species.



For more information about the Center's campaign to stop the amphibian and reptile extinction crisis, contact:

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