



U.S. Fish & Wildlife Service

Mississippi Gopher Frog

*(distinct population segment of
Rana capito sevosa)*



The Mississippi gopher frog has been proposed as an endangered species. Identifying, protecting, and restoring populations of endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program. An endangered species is one that is in danger of becoming extinct throughout all or a significant portion of its range, while a threatened species is one that is likely, in the foreseeable future, to become endangered.

Appearance

Facts about the Mississippi gopher frog

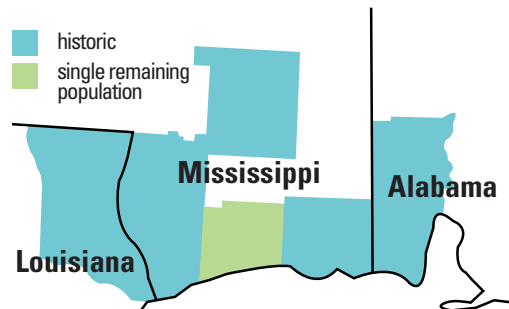
The Mississippi gopher frog is a mid-sized, stocky, frog whose total body length is about three inches. The frog's back ranges in color from black to brown or gray and is covered with dark spots and warts.

Range

The frog once made its home in nine counties or parishes in Louisiana's lower coastal plain, east of the Mississippi River; to the Mobile River delta in Alabama. It has not been seen in Louisiana since 1967 or in Alabama since 1922. The Mississippi gopher frog is presently known to survive at only one site in Harrison County, Mississippi.

Habitat

The Mississippi gopher frog's habitat includes both upland, sandy, areas covered with longleaf pine forest; and isolated, temporary, wetland breeding sites within the forested landscape. Adult frogs spend most of their lives underground in forests with an open canopy and abundant ground cover. They use active and abandoned gopher tortoise burrows, abandoned mammal burrows and holes in and under old stumps as their underground retreats. Mississippi gopher frog breeding sites are isolated ponds that dry out completely at certain times of the year. Substantial winter rains are needed to ensure that the ponds are filled sufficiently to allow development of juvenile frogs. The timing and frequency of rainfall is critical to the successful reproduction of the Mississippi gopher frog.



Why has the Mississippi gopher frog been proposed as an endangered species?

There is only one remaining population of the Mississippi gopher frog. It consists of approximately 100 adult frogs. Natural processes, such as genetic isolation, inbreeding, droughts, and floods, pose ongoing threats to the population. In addition, a residential development, new and expanded highways, and a proposed reservoir are planned in the immediate vicinity of the only remaining breeding pond for the frog. The main threats posed by these projects are local changes in hydrology, fire suppression, habitat destruction and fragmentation, as well as sedimentation and toxic chemical run-off.

Hydrology

The Mississippi gopher frog's breeding pond must maintain its isolation and its annual cycle of filling and drying or it will not serve as suitable habitat. The planned commercial development in the area will result in wetland dredging and filling to prepare housing sites, to build the proposed golf course and sewage treatment plant, and to construct highways. Although the specific consequences of the proposed hydrological alterations cannot be estimated without further study, these actions have the potential to adversely affect the breeding pond.

Fire suppression

Frequent fires are necessary to maintain the open canopy and ground cover vegetation of the aquatic and terrestrial habitats of the Mississippi gopher frog. Residential development and road construction in the vicinity of the breeding pond will create increased concerns about smoke and public safety. This will likely reduce the use of fire as a management tool. At this time, fire is the only known management tool that will maintain the remaining breeding pond as suitable habitat.

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Habitat destruction and fragmentation

Highway expansion occurring and planned in the vicinity of the only Mississippi gopher frog pond will further fragment the available longleaf pine habitat. Urbanization will expand along these highway corridors and reduce the amount of habitat available for the frog. As the amount of habitat decreases, the Mississippi gopher frog becomes increasingly vulnerable to environmental variability and may be unable to survive extreme events, such as drought.

Sedimentation and toxic chemical run-off

Sediment is material in water that is in suspension, is being transported, or has been moved as the result of erosion. Sedimentation is a natural process resulting from erosion; however, dredging, timber harvesting, heavy recreational use, highway run-off, and other activities cause high levels of erosion and increased sedimentation. Some chemicals used as herbicides and pesticides are known to be toxic to aquatic amphibians. Since there is only one remaining pond for the Mississippi gopher frog population, any sedimentation or toxic run-off that reaches the pond could destroy the pond and injure or kill tadpoles and adult frogs.

Pre-listing

What is being done to prevent the extinction of the Mississippi gopher frog?

The U.S. Fish and Wildlife Service has been working with the U.S. Forest Service since 1988 to protect the last remaining Mississippi gopher frog population. In addition, both agencies have joined forces to rehabilitate a nearby pond as a future breeding site for this rare frog. The Service, in conjunction with gopher frog researchers, has developed a strategy to introduce egg masses into this pond and to determine if the eggs can successfully develop into juvenile frogs at the site.

Listing

The proposal to list the Mississippi gopher frog as an endangered species includes a request for data and comments from the public. After review of public comment, the Service will determine if the protection of the Endangered Species Act should be made permanent.

Recovery Plan

If a final determination is made to list the Mississippi gopher frog as an endangered species, the U.S. Fish and Wildlife Service will prepare a recovery plan that describes actions needed to aid in the Mississippi gopher frog's survival. In general, recovery actions are likely to focus on techniques to protect the local hydrology of the existing breeding site and to develop additional breeding sites to reduce the frog's vulnerability to extinction.

Learn

What can members of the public do to help prevent the extinction of this species?

Learn more about the Mississippi gopher frog and other endangered and threatened species. Understand how the destruction of habitat leads to loss of endangered and threatened species and our nation's plant and animals diversity. Tell others about what you have learned.

Join

Join a conservation group; many have local chapters.