

Mississippi Gopher Frog Fact Sheet

(*Rana capito sevosa* distinct population segment of *Rana capito*)

Endangered Species Listing:

In 2001, the Mississippi gopher frog distinct population segment (DPS) was listed under the Endangered Species Act (Act) as an endangered species. A DPS is a discrete and significant conservation sub-unit of a species. An endangered species is one that is in danger of becoming extinct throughout all or a significant portion of its range. After an endangered species is identified and protected under the Act, the U.S. Fish and Wildlife Service endangered species program begins the work of restoring the species and its habitat through the recovery process.

Appearance:

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



photo: ©John Tupy

Adult Mississippi Gopher Frog (MGF)

Tadpoles are dark greenish brown with spotted round bodies and long, wide tails. They are difficult to tell apart from tadpoles of the more common leopard frog.

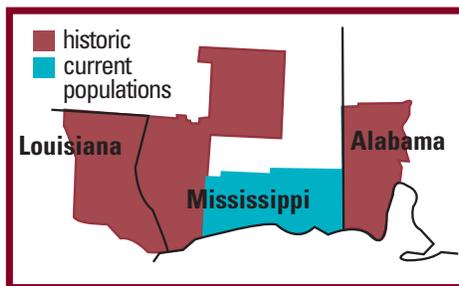


photo: ©John Tupy

MGF tadpole

Range:

The MGF is thought to have occurred in at least nine counties or parishes from Louisiana's lower coastal plain east of the Mississippi River to the Mobile River delta in Alabama. It has not been observed in Louisiana since 1965 or in Alabama since 1922. The Mississippi gopher frog is presently known to survive in only Harrison and Jackson counties in Mississippi.



Threats:

The primary threats to the MGF are habitat fragmentation/destruction, fire suppression, the low number of remaining individual frogs, and environmental variability. Outside of occupied habitat and those areas managed as future translocation sites, potential gopher frog habitat continues to decline through fragmentation and destruction, primarily as a result of urbanization from residential and commercial development. Frequent fires are necessary to maintain the open canopy and ground cover vegetation of Mississippi gopher frog habitat. However, the use of fire as a management tool has declined due to concerns about smoke and public safety in expanding urban areas. The low numbers of frogs in the existing populations have increased the potential of genetic isolation and inbreeding. The combination of decreasing amounts of suitable habitat and low population numbers makes the Mississippi gopher frog's survival more difficult in the face of extreme environmental events such as drought.

Habitat:

The Mississippi gopher frog's habitat includes both upland forested areas, historically dominated by longleaf pine, and temporary wetlands imbedded within the forested landscape. Adult and juvenile gopher frogs spend the majority of their lives underground in forests with an open canopy and abundant ground cover. They currently use abandoned mammal burrows and holes in and under old pine tree stumps as below-ground retreats. In the past, Mississippi gopher frogs also used active and abandoned gopher tortoise burrows. However, due to the rarity of the tortoise, their burrows are not currently available in habitat occupied by the frogs. Gopher frog breeding sites are isolated ponds which dry out completely at certain times of the year giving them a temporary presence in the landscape. Substantial winter rains are needed to ensure that the ponds are filled sufficiently to allow hatching and development of juvenile frogs. The timing and frequency of rainfall are critical to the successful reproduction and recruitment of the MGF.



photo: ©John Tupy

MGF upland habitat



photo: Linda LaClaire

MGF breeding habitat

What has been done to work towards Mississippi gopher frog recovery?

The U.S. Fish and Wildlife Service has been working on a number of recovery projects with the following partners: the Memphis Zoo along with other zoos involved in the American Zoo Association's program for the species, the U.S. Forest Service, Natural Resources Conservation Service, Mississippi Natural Science Museum, The Nature Conservancy, and researchers with Southeastern Louisiana University, University of New Orleans, University of Southern Mississippi, Eastern Carolina University, and Eastern Kentucky University. The recovery projects include:

- Raising frogs from tadpoles in tanks placed adjacent to breeding sites.
- Improving occupied sites through controlled burning and shrub removal.
- Restoring currently unsuitable temporary ponds for use as relocation sites.
- Constructing new potential breeding ponds.
- Holding a genetically diverse population in zoos and working on captive propagation.
- Establishing new populations in the wild.
- Tracking gopher frogs in their upland habitats using fluorescent powder and radio-telemetry.



photo: Ed Moody

Restoring ponds for use as MGF relocation sites



photo: ©John Tupy

Tracking MGF at night using fluorescent powder



photo: ©Mike Sisson

A newly constructed potential MGF breeding pond



photo: ©John Tupy

Tracking MGF during the day using radio-telemetry (transmitter is black object at rear of frog)

How many Mississippi gopher frogs remain in the wild?

At this time, there are only two natural breeding populations of the Mississippi gopher frog. A single male gopher frog was heard calling at a third site in 2004, however, no additional observations of the species have been made there since. A fourth site is currently occupied by the Mississippi gopher frog as a result of efforts to establish a population by translocating frogs from the primary breeding pond. The total adult Mississippi gopher frog population in the wild is estimated to be less than 100 individuals.

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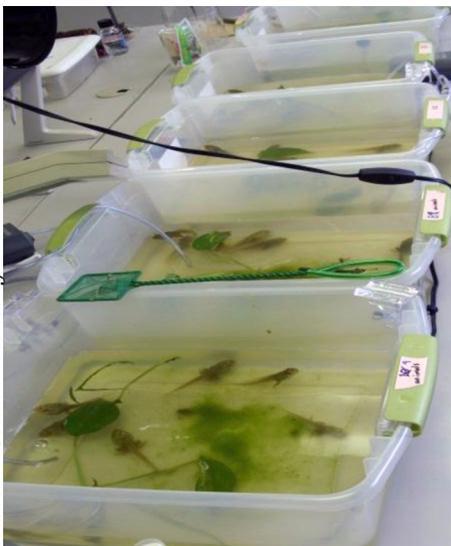


photo: ©Steve Reichling

MGF tadpoles held in zoos



photo: Linda LaClaire

Tanks for raising MGF tadpoles

