

frog conservation project

frog & fish restoration outreach group




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For more information on the FROG Project and to learn more about these and other aquatic species, please visit our web site:

<http://sites.google.com/site/frogspotsprogram>

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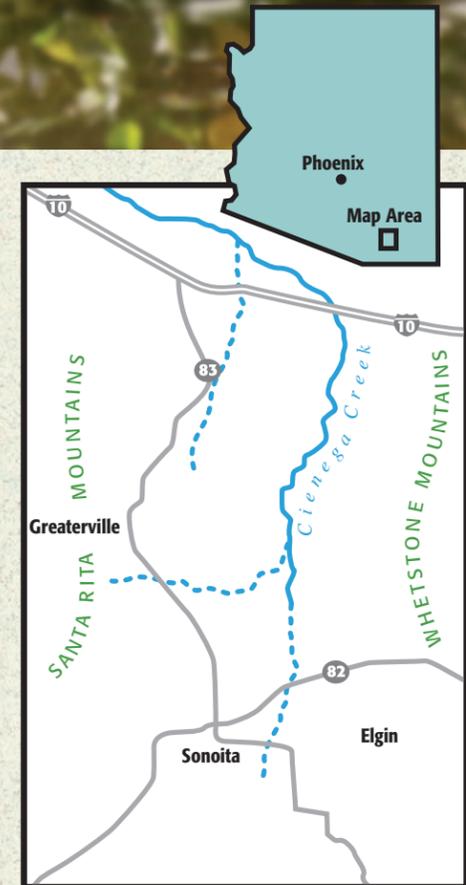
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Man-made wet spots come in many shapes and sizes, from livestock waters to backyard landscape features. Some harbor invasive species that threaten wildlife; others harbor endangered species, contributing toward the recovery of these unique natives.

The FROG Conservation Project is a partnership dedicated to saving the wildlife and habitat of Cienega Creek and surrounding areas. Species dependent on wetland habitat are being threatened by non-native invaders like bullfrogs, mosquitofish and crayfish. By ridding the valley of these threats and enhancing habitat, we hope to recover populations of threatened native fish and leopard frogs. By increasing the numbers of these animals, we believe many other plants and animals will benefit, contributing to the health of the entire Cienega Creek ecosystem. **We can't do it without your help.**



project goals

- Create new leopard frog breeding populations in the upper watershed of Cienega Creek.
- Elimination of non-native aquatic species that threaten native plants and animals of upper Cienega Creek.
- Engage community in research and monitoring, and to support native species recovery.

What is the Upper Cienega Creek Watershed?

The upper Cienega Creek Watershed is the basin bounded by the Whetstone Mountains to the east, the Santa Rita Mountains to the west, the Canelo Hills to the south, and I-10 to the north. Water drains from these mountains toward the Cienega Creek valley and springs forth out in the valley. The upper elevations of the watershed include pine-oak and ponderosa pine forests in the Coronado National Forest, while lower elevations have magnificent saguaros, desert scrub, rolling grasslands, oak-studded hills, and the lush riparian ribbon along Cienega Creek. The upper Cienega Creek watershed is predominately Federal and State Trust land with areas of private land.

we need your help

Report threatened wildlife observations

We're looking for information on any of our target species observed in the valley.

Report invasive aquatic species

We want to locate where problematic invasive species are living in the valley to help protect sensitive native species.

Help us survey private ponds

We want to communicate and cooperate with anyone that has a permanent pond or spring on their property. We want to document what species are currently there and offer help with any species the landowner would like to attract or eliminate.

Reduce the amount of water you pump

Studies have documented a direct correlation between ground water pumping and the amount of water that flows in springs and streams lower in a valley. Wells miles away could intercept ground water before it can reach the creek.

Convert an existing pond into native habitat

Existing ponds, especially ponds harboring non-native species can be converted into native species-friendly ponds. We have specialists and volunteers devoted to helping area pond owners free of charge.

native species of concern

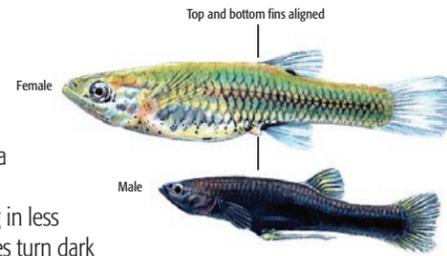
The aquatic (live in water) species of the upper Cienega Creek watershed we are trying to protect.

Gila Topminnow

(endangered species)

Size: 1-2 inches

Once the most widespread fish in the Gila River basin (including Santa Cruz River), the Gila topminnow now claims Cienega Creek as its last stronghold in the United States. This guppy-like fish is good at thriving in less than ideal water conditions and loves to feast on mosquito larva. Males turn dark brown or black during the breeding season. Loss of habitat and the introduction of non-native fish, especially the very similar mosquitofish, have eliminated this species from most of its former range.



Gila Chub

(endangered species)

Size: 1.5 - 14 inches

This is the largest of our Cienega Creek fish. Gila chub are a shy species preferring deep pools where they are not easy to observe. They are currently found in only a few other drainages in Arizona, and Cienega Creek is among the most secure populations left. Loss of habitat and introduction of non-native fish, especially green sunfish, has primarily contributed to its decline.



Chiricahua Leopard Frog

(threatened species)

A grassland and mountain species, this frog prefers ponded and marshy habitats and was once extremely abundant in the Cienega Valley and surrounding mountains. Due to habitat loss, disease, and invasive species impacts, the Chiricahua leopard frog is federally listed as a threatened species.



Mexican Gartersnake

(candidate threatened species)

Difficult to tell from other local gartersnakes, this is southern Arizona's most aquatic (lives mostly in water). They feed mainly on frogs and fish, and, unfortunately, throughout most of their range, these prey items are diminished. To further complicate the life of a Mexican gartersnake, bullfrogs readily eat their young and most sport fish are too large for them to eat. Successful efforts to reestablish native frogs and fish will surely benefit this rare species.



invasive non-native species of concern

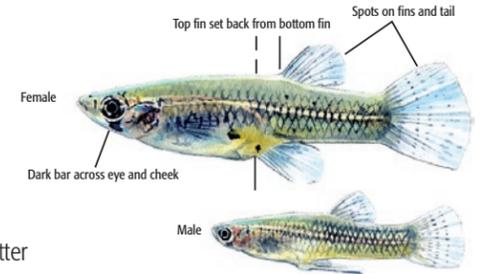
The invasive species that pose the greatest threat to aquatic wildlife of the upper Cienega Creek watershed.

Mosquitofish

(non-native invasive)

Size: 1-2 inches

This small fish has been widely introduced around the world for mosquito control. A very aggressive feeder and breeder, it out-competes our native fish and will readily feed on young topminnows. This species is considered the most pressing threat to the native fish community of Cienega Creek, especially the Gila Topminnow population, and should be kept out of the entire watershed. It is no better than the topminnow at controlling mosquitoes, and perhaps less efficient.



Green Sunfish

(non-native invasive)

Although similar to the bluegill, the green sunfish is better adapted to life in Arizona streams, and has invaded many of our rivers and streams. Green sunfish eat native fish, frogs and eliminate the water insects that are critical in natural food chains. Green sunfish are often stocked in ponds by well-intentioned sportsmen but these fish wreak havoc with native species, and usually become stunted and undesirable for angling.



Bullfrog

(non-native invasive)

The American bullfrog was introduced from Eastern states. This species has proven to be extremely adaptable to our area where it has fewer predators. Bullfrogs eat most anything they can fit into their large mouths. Researchers working along Cienega Creek have documented an incredible diversity of wildlife in the stomach contents of these efficient predators, everything from small insects to birds, bats, snakes, and fish. Bullfrogs can travel long distances during wet seasons and have special adaptations for locating water. They often carry a deadly frog disease that kills leopard frogs. Please report any sighting of bullfrogs to our biologists.



Crayfish or Crawdad

(non-native invasive)

Probably the greatest threat to Cienega Creek, crayfish devour plants, snails, insects, fish, frogs, and hatchling turtles. By stripping vegetation from the stream, the banks become unstable and easily wash away, contributing to erosion. By eliminating the smaller life forms, larger animals no longer have a food base. These impacts can combine to cause a complete collapse of a stream's food chain, which has been repeatedly seen in Arizona, including in important trout-fishing streams. Many of Arizona's rivers have been taken over by crayfish and no longer support clear water with abundant aquatic life.



Other non-native species that can threaten native wildlife

Bluegill

Largemouth Bass

Bullhead Catfish

Goldfish/Koi/Carp

Barred Tiger Salamander