



U.S. Fish & Wildlife Service

# Ozark Cavefish

## *Oklahoma Ecological Service Field Office*

### Ozark Cavefish

*Amblyopsis rosae*

#### Description

Ozark cavefish are small fish reaching a total length of about two inches. The fish are true troglobites or obligatory cave inhabitants, and live most of their life in total darkness. They have only rudimentary eyes and no optic nerve. They also lack pigment, but appear pinkish-white because their translucent skin reveals blood and organs.

#### Distribution

The species occurs in caves within the Springfield Plateau of the Ozark Highlands in northwest Arkansas, southwest Missouri, and northeast Oklahoma.

#### Life History

Knowledge of cavefish life history is limited. The species is believed to have low reproductive capacity and to be slow to reproductive maturity. Only about 20 percent of the population is believed to breed in any given year. Infrequent reproduction may be an adaptation to a limited food supply which is typical of cave environments. The size and shape of the gill chamber indicate that the species may be a gill chamber brooder. The Ozark cavefish is considered the most adapted of all the cavefish for cave life due to well-developed sensory papillae. They tend to occur in caves with groundwater recharge and generally are acknowledged to be a groundwater obligate. Ozark cavefish occur in flowing cave streams with chert rubble substrate and pool areas. They also have been found in wells and sinkholes. This species primarily feeds on small crustaceans such as copepods, isopods, and amphipods. Cavefish also prey upon small crayfish, oligochaetes (e.g., segmented worms), small salamanders, and salamander larvae.

#### Conservation

The Ozark cavefish was listed as threatened on November 1, 1984 due to habitat alteration and over-collecting. In the past, removal for scientific purposes and the aquaria trade had a demonstrated impact. Habitat degradation and pollution due to agricultural activities and development currently are considered



*Ozark Cavefish.* © Dante Fenolio

primary threats to the Ozark cavefish. Conservation efforts include protecting caves used by the cavefish and the recharge area (the area involved with input of water into the cave system) of these caves. Recovery efforts also include educating the public about the sensitive nature of cave ecosystems, the highly specialized and often rare fish and wildlife species that inhabit caves, and land use practices that help prevent pollution of caves.

#### What Can You Do to Help

Do not enter gated caves or caves with a sign at the entrance which indicates it is used by federally-listed species. These gates and signs are in place to protect unique cave environments and rare cave fauna that are sensitive to human disturbance. Learn about land use practices that help prevent unnecessary pollution of caves such as avoiding the use of chemicals near caves, streams, and sinkholes, and leaving vegetated buffers along streams and around sinkholes. These land use practices not only help protect caves and cave fauna but also will help protect the quality of drinking water of the people that live in the area. Tell others what you have learned.

#### References

Graening, G. O., D. B. Fenolio, M. L. Niemiller, A. V. Brown, and J. B. Beard. 2009. *The 30-year recovery effort for the Ozark cavefish (Amblyopsis rosae): Analysis of current distribution, population trends, and conservation of this threatened species.* Environmental Biology of Fishes 87:55-88.

U. S. Fish and Wildlife Service. 1989. *Ozark Cavefish Recovery Plan.* U. S. Fish and Wildlife Service. Atlanta, Georgia. 15 pp.

#### For Further Information

U.S. Fish and Wildlife Service  
Oklahoma  
Ecological Services Field Office  
9014 East 21st Street

Tulsa, OK 74129  
918/581-7458

August 2011