Silvery Minnow Fact Sheet

The Rio Grande silvery minnow was once one of the most common species in the Rio Grande, occurring from near Espanola, NM downstream over 1,000 miles to the Gulf of Mexico. The species also inhabited much of the Pecos River.

The species has been extirpated from more than 95% of its historical range and today occurs only in 170 mile stretch of the river in the Middle Rio Grande Valley.

The primary reasons for the species' endangerment include:

- Diversion and regulation of stream waters, which has led to severe flow reductions, often to the point of dewatering extended lengths of the rivers' channel.
- Alteration of the natural hydrograph, which impacts the species by disrupting the environmental cues the fish, receives for a variety of life functions, including spawning.
- Modification and simplification of habitat due to altered timing and volume of flows.
- Channelization, bank stabilization, levee construction and dredging, which result in direct and indirect impacts to the habitat by eliminating the slow water and sandy bottom habitat the minnow requires.
- Introduction of non-native fishes that directly compete with, and can totally replace the Rio Grande silvery minnow, as has already happened in the Pecos River system.
- Discharge of pollutants from industrial, municipal, and agricultural sources.

The minnow is a pelagic spawner meaning that the species produces buoyant eggs during the spring and early summer high flows which then cause the eggs and newly hatched fish to float downstream.

As the eggs float downstream, they and the young of year become "entrained" in canals, the Low Flow Conveyance Channel and other diversion ditches. These fish likely do not escape from diversion canals after they've been entrained.

Preferred habitat for the Rio Grande silvery minnow includes stream margins, side channels, and off-channel pools where water velocities are low or reduced from main channel velocities. Sandy bottom areas with aquatic vegetation and instream debris are preferred by the species.

Because dams prevent the species from migrating back upstream once the eggs hatched downstream, nearly 70% of the entire population of Rio Grande silvery minnow exists below the San Acacia diversion dam in a 50 mile stretch of the Rio Grande.

In 1996, agricultural interests diverted the entire flow of the river for weeks, killing more than 10,000 minnows. Although the action violated the Endangered Species Act, the FWS failed to take punitive action that could have resulted in acquisition of permanent instream flows for the river.

The minnow is one of four genetically distinct subspecies of minnow.

In the past, many Rio Grande silvery minnows contracted a condition called lordosis, which consists of spinal deformations and is usually caused by chlorine.

The species is one of nature's "canaries in the coal mine," indicating the general health of the river ecosystem is endangered.