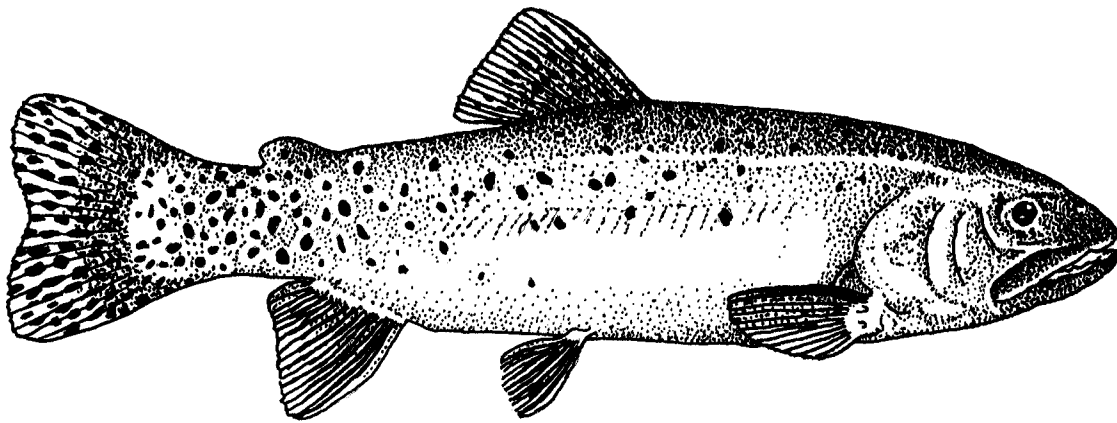




# WILDLIFE NOTES

## Rio Grande cutthroat trout

Artwork: Kathy Harms



The Rio Grande cutthroat trout, classified in the Salmonidae family, is New Mexico's state fish and one of only two trout native to the state (the other is the Gila trout (*Oncorhynchus gilae*). It was first described in 1857, based on specimens collected by members of the Pacific Railroad Survey in 1853 from Ute (Utah) Creek in the Rio Grande drainage in the San Luis Valley of Colorado.

One of 14 subspecies of cutthroats, the Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*) gets its name from the yellowish-orange slash marks on the lower jaw; the marks distinguish it from the somewhat similar rainbow trout. The Rio Grande

cutthroat's body is yellowish green to grayish brown with black spots. Its abdomen is creamy white.

The historic range of the Rio Grande cutthroat is not definitely known, but likely included all small, swift-running, cold streams presently capable of supporting trout in the Rio Grande drainage (including the Chama, Jemez, and Rio San Jose drainages along with "trout" waters of the Pecos and Canadian drainages).

Populations currently live in isolated headwaters of four major drainages. Of these, the Rio Grande drainage has the highest number of populations, with 23 in the Sangre de Cristo Mountains, 13 in the Jemez Mountains, four in the San Juan

Mountains, and one in the Black Range. In three other drainages, 21 streams have populations of Rio Grande cutthroat: Pecos, nine; Canadian, including the Mora, 11; and Tularosa Basin, one.

Cutthroat trout prefer clear cold water, at temperatures less than 59 degrees F. Spawning occurs from March to July, depending on water temperature, elevation, and other

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factors – such as the availability of deep pools and under-cut banks. The trout use pools for resting, feeding, and overwintering, and under-cut banks for protection from predators. Shade is also important, as it helps keep the water temperature cold.

One trout will produce 200 to 4,500 eggs, laid in a gravel nest known as a redd, built by the female. The trout requires a healthy habitat of flowing water with high oxygen levels, which is a necessary requirement of developing embryos.

In the cooler waters of headwater streams trout mature at a smaller size than they do at lower elevations (fish grow faster in warmer waters). Juveniles prefer surface or rubble cover rather than overhanging banks and deep pools.

Cutthroat trout are opportunistic feeders. They eat insects such as stoneflies, mayflies, and caddisflies

during the summer. They also feed on invertebrates, zooplankton, and crustaceans.

Much of the trout's habitat in New Mexico has been harmed by livestock overgrazing and other use, including recreational. The limited vegetation in the watershed, especially in riparian areas, has altered stream nutrients.

Rio Grande cutthroat trout have been removed from several streams to raise hatchery fish for restoring wild populations. Restoration must be in streams that have no other trout species, however, as cutthroat trout will hybridize with rainbow trout and other subspecies of cut-

throats. Other salmonids also compete with Rio Grande cutthroat for food and space.

Currently conservation of existing populations includes a variety of projects. Streams that provide appropriate cutthroat trout habitat are inventoried for populations and for genetic purity. To determine fish genetics, small fin clips can provide samples for DNA lab studies. Barriers may be built in some streams to inhibit exotic trout from swimming upstream to existing populations of Rio Grande cutthroat trout and electroshocking can be used to remove the non-native fish as well.

