Tracking Nevada's cutthroat trout
By Larry Hyslop


Inserting a radio tag into a Yellowstone Cutthroat Trout

Yellowstone cutthroat trout are one of five native trout in Nevada waters. Found in Yellowstone Lake, across Montana, Idaho and Utah, these cutthroats only enter Nevada along Goose Creek in the very northeastern corner of the state. Goose Creek flows into Nevada from Idaho, loops across the state's corner and into Utah.

These cutthroats are a valuable part of the Native Slam program, where fishermen catch, photograph and release each of these native trout. They include the Yellowstone, Lahontan, Bonneville, and redband cutthroat, along with the bull trout. When fishermen send their photos into the Nevada Department of Wildlife state office, they can receive a Native Slam certificate.

Gary Johnson is an NDOW fisheries biologist with 30 years' experience working with fish. In 2010, he had two important questions regarding the Yellowstone cutthroat trout. First, were water diversion structures on Goose Creek keeping these trout from migrating upstream to spawn? Second, if the trout could travel upstream, where did they go to spawn?

These questions would be hard to answer but for recently developed technology. Radio tags can now be implanted into fish and tracked using an antenna and radio receiver. The project began in October of 2010. If you have tough days at work, imagine Gary's day when he, along with helpers, had to fish for eligible cutthroat trout. Using spinners, they caught 15 trout, each 11-16" long, from beaver dams upstream of the Rancho Grande.

The fish were placed in containers and trucked south to a bridge across Goose Creek along the Thousand Spring Valley road. There, a team including a veterinarian implanted the tootsie roll size radio tags. After anesthetizing each fish, a ½" slit was made in the belly and the radio tag implanted. A thin antenna trailed from the belly and the belly was stitched up. The fish were released downstream of the bridge, placing them downstream of some water diversion structures. The tag's batteries were designed to last close to 441 days and Gary tracked some fish for over 500 days.

During the winter of 2010-2011, most tagged fish stayed about four miles below the release site, using ponds behind beaver dams. Gary said these beaver dams are vital to winter survival of these fish. He spent many hours taking weekly walks along the banks of Goose Creek, mostly across private ground, tracking and finding most of these fish.

Unlike larger radio tags or collars, these do not give off a death signal. Gary thinks two fish died in ponds since their radio signal stayed in the same place and he found one bent up tag on the bank, but most fish survived the winter.

In late April, 2011, the fish began moving upstream. This answered the first question since gates in the water diversion structures had not yet been closed. They moved approximately 0.6 miles per day. In early May, they entered Idaho. By mid-June, five fish were 25 miles from the release site, along the Goose Creek headwaters. They were most likely spawning and therefore answering the second question.

By July, some fish returned to Nevada. Others returned during the fall, and 7 or 8 were found in the same beaver ponds where they had been caught the year before. Sixty percent of the tagged fish survived that first year.

Gary Johnson and NDOW now knows a little more about Nevada's Yellowstone cutthroat trout, thanks to modern technology.

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