

NEVADA DIVISION OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS
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2013

NATIVE SPORT FISHERIES MANAGEMENT
YELLOWSTONE CUTTHROAT TROUT
EASTERN REGION



**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

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**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

State: Nevada
Project Title: Statewide Fisheries Program
Job Title: Yellowstone Cutthroat Trout
Period Covered: January 1, 2013 through December 31, 2013

SUMMARY

Yellowstone cutthroat trout population monitoring occurred on three streams within the Goose Creek drainage. Little Goose Creek had the largest population of Yellowstone cutthroat trout present, with lesser numbers in Upper Goose Creek and Coon Creek. Brook trout removal efforts continued in Piney Creek, with 135 brook trout being removed from the system. Information on Yellowstone cutthroat trout in Nevada was provided to the Interstate Working Group for a future status assessment of the species.

BACKGROUND

The native range of the Yellowstone cutthroat trout *Oncorhynchus clarki bouvieri* in Nevada includes the Goose Creek drainage in Northeast Nevada, which is its southernmost distribution. Distribution also extends to river and lake accessible drainages upstream of Shoshone Falls located on the Snake River including Yellowstone Lake and Upper Yellowstone River flowing east of the Continental Divide. Progeny of eggs taken from Yellowstone Lake spawners were extensively stocked into other Nevada waters during the first half of the 20th Century. In Nevada, pure genetic populations of introduced Yellowstone cutthroat trout (YCT) do not persist outside the Goose Creek drainage native range.

Both the Upper and Lower Goose Creek drainages are in south-central Idaho. Upper Goose Creek drains from the Sawtooth National Forest south about 10.7 mi into Nevada where it makes a 27.3 mi U-shaped path before coursing 2.1 mi through northwest Utah. Goose Creek then flows 11 mi south, back into Idaho where it terminates into Lower Goose Creek Reservoir. Goose Creek does not join the Snake River as it once did due to diversion of water below the reservoir. In Nevada, the Goose Creek drainage is on public land managed by the Bureau of Land Management, however, about 91% of the stream runs through private, irrigated ranch land. Both Piney Creek and Trout Creek are trout bearing streams with headwaters in Idaho that join Goose Creek in Nevada. Other streams known to have contained YCT include both Coon Creek and Little Goose Creek, which are wholly in Nevada and flow easterly to join Goose Creek. Private land (both fenced and unfenced) encompasses the majority of all tributary streams.

The YCT within the drainage faces a number of threats including displacement by competing brook trout, unscreened ditches and dewatering, unsuitable summer

thermal conditions, and rainbow trout hybridization. From 1980 to 2002, YCT in Nevada showed an 83% decline in presence at surveyed sites. Improvements in the status of the YCT in Nevada will depend on coordinating projects with Idaho Fish and Game and the respective land management agencies. Yellowstone cutthroat trout represent a unique subspecies of cutthroat trout and, because of its limited native range, is the rarest of the three subspecies of cutthroat trout that inhabit Nevada.

OBJECTIVES and APPROACHES

Objective: Yellowstone Cutthroat Trout Management

Approaches:

- Electroshock Piney Creek to capture and remove brook trout.
- Electroshock the 1980 survey sites in the Goose Creek Drainage within Nevada to discern the status of the Yellowstone cutthroat trout population.
- Continue to coordinate with the Yellowstone Cutthroat Trout Interstate Working Group.

PROCEDURES

A portion of Piney Creek was sampled with a Smith Root LR-20B through a single pass procedure. All captured brook trout were counted, quickly killed, and removed from the stream.

Four stations on Upper Goose Creek and two on Little Goose Creek, each being 200 ft in length, were sampled with a Smith Root LR-24 through a single pass procedure. Additionally, two stations on Coon Creek, each being 100 ft in length, were sampled with the same methodology. All captured YCT were weighed, measured, and checked for body condition before being returned to the stream. Any misses were also counted to assist in determining fish population and age frequency. Additionally, all endemic nongame fish were recorded.

FINDINGS

Piney Creek

A total of 135 brook trout were removed from 1.8 mi of lower Piney Creek. No cutthroat trout were captured or observed during the survey.

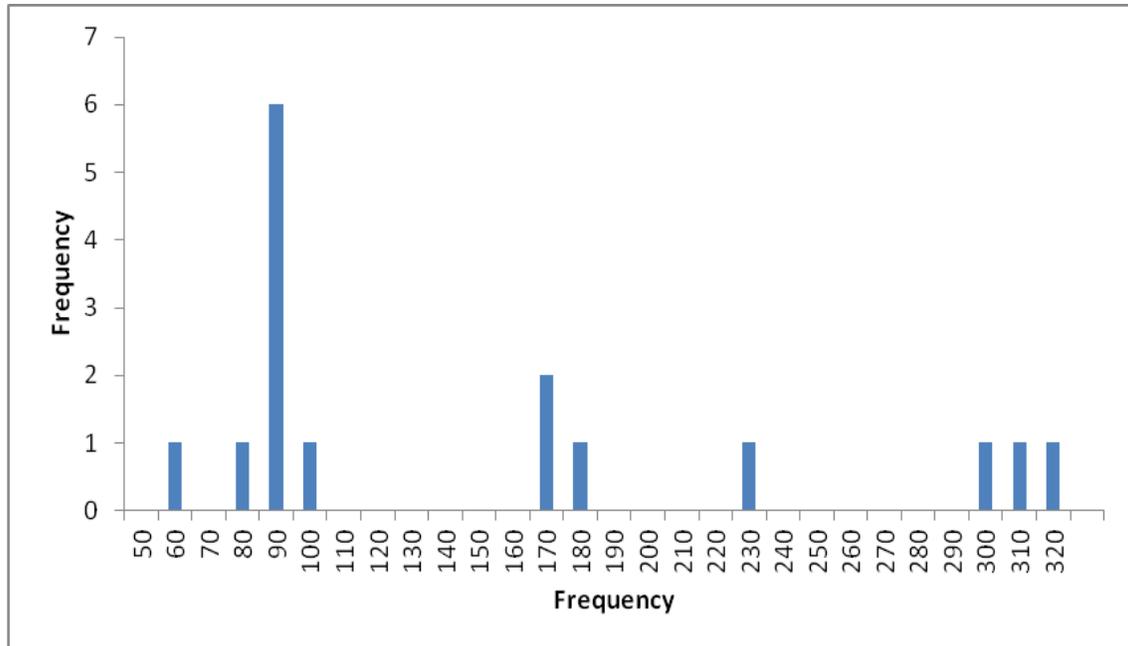
Upper Goose Creek

One 228 mm YCT and one 30 mm YCT were contacted during the survey, both at sample site GC20. Due to the very limited population size, no accurate population estimate could be made. Additionally, four species of endemic nongame fish were contacted during the survey, which included 32 Paiute sculpin, 69 redbside shiners, 90 speckled dace, and a single bridgelip sucker.

Little Goose Creek

Sixteen Yellowstone cutthroat trout were contacted during the survey. These included 8 at LGC6 and 8 at LGC8, with 3 age classes being represented. The smallest YCT contacted was 51 mm and the largest was 313 mm, with an average size of 147 mm and a relative abundance of 422 fish per mile in the sample area. Figure 1 illustrates the length frequency distribution of the population sampled.

Figure 1. Length Frequency of YCT in Little Goose Creek.



Each station and the number of YCT contacted during each year's survey are illustrated in Table 1. The NS denotes years in which no survey occurred at the station.

Table 1. Little Goose Creek YCT Survey Summary.

Station	2002	2007	2013
LGC4	0	1	NS
LGC6	1	9	8
LGC8	0	0	8
LGC10	0	NS	NS

Coon Creek

A single 29 mm Yellowstone cutthroat trout (YCT) was sampled at CC2. Fifteen speckled dace and seven Paiute sculpin were contacted at CC1, while non-game endemics were not present at CC2. Five brook trout were also removed from Coon Creek during the survey. Three were removed from the lower station and an additional two from the upper station.

Yellowstone Cutthroat Trout Interstate Working Group

The Yellowstone Cutthroat Trout Interagency Working Group was attended on December 12-14, 2012 in Bozeman, Montana. Information on Yellowstone cutthroat trout in Nevada was provided to the Working Group in 2013 for a future status assessment of the species.

MANAGEMENT REVIEW

All Yellowstone cutthroat trout objectives were completed. Issues with private landowners arose during the 2013 field season, which will limit future management efforts. Efforts should be made to rebuild relations with the landowners before any future activities can take place.

RECOMMENDATION

- Continue to rebuild relations with the private landowners in the drainage before any future management activities are planned
- Continue ongoing brook trout removal efforts in Piney Creek.

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