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North Fork Trinity River Adult Summer Steelhead and Spring Chinook Survey, 1995  
RSF 90432

Shasta-Trinity National Forest  
Big Bar Ranger District  
North Fork of the Trinity River

August 31, September 5, 6, 7 1995 (portion below E.Fork done August 31)

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Adult Summer Steelhead and Spring Chinook Salmon Survey

The North Fork of the Trinity River is a tributary of the upper Trinity River. It flows in a southerly direction through steep mountainous terrain for approximately 27 miles from its headwaters in the Trinity Alps to the confluence with the Trinity River near Helena. Two crews (two swimmers each) surveyed approximately 20.5 miles of this tributary by direct observation snorkeling in August and September 1995. The survey for adult summer-run steelhead (Oncorhynchus mykiss) and spring-run chinook salmon (Oncorhynchus tshawytscha) began at the confluence of Grizzly Creek with the North Fork Trinity and proceeded in a downstream fashion to the confluence with the mainstem Trinity River.

The survey was conducted by snorkeling all habitats thought to hold adult summer-run steelhead and spring-run chinook salmon. Locations of fish observations and habitat types are recorded on the accompanying topographic map. The reach labels were designated previously and may not correspond to daily swimming reaches. In several previous surveys, larger tributaries of the North Fork Trinity have been surveyed. In 1995, 1.6 miles of Rattlesnake Creek were surveyed. Eight miles of the East Fork of the North Fork Trinity was snorkeled in a separate survey August 30-31. Grizzly Creek and the North Fork above Grizzly were not covered in 1995.

Observations

Reach A and Reach B

Reach A and B include Grizzly Creek and the North Fork Trinity above Grizzly. As mentioned above, these reaches were not covered during the 1995 survey. On August 6 at 0945 hours, the water temperature was 48.9° F in Grizzly Creek and 51.8° F in the North Fork above Grizzly.

Reach C

This reach extends from the confluence with Grizzly to the Jorstad cabin. Ten adult steelhead were observed, all in lateral scour pools (bedrock). The temperature just downstream of the Grizzly confluence was 49.7° F at on August 6 at 0945 hours.

Reach D

Reach D extends from just below Jorstad Cabin to the confluence of Rattlesnake Creek and the North Fork. This reach is 2.5 miles long. Forty-three adult steelhead trout and one half pounder were observed in this section. No adult salmon were observed. All adults were observed in main channel or lateral scour pools, both associated with bedrock.

43 A  
1.40

Reach E

This reach includes Rattlesnake Creek to the first "real" trail crossing. There are more pools in the upstream portion of this section. 1.6 miles of this tributary to the North Fork Trinity was surveyed. No adults were seen. Juvenile rainbow/steelhead trout were commonly observed. The water temperature ranged from 51.6° F (51.3° F, air) to 55.6° F (76.9° F, air) on August 5.

Reach F

Reach F begins at the confluence of Rattlesnake Creek and the North Fork Trinity and extends downstream 3.5 miles to Keystone Flat. Three hundred eighty-seven adult steelhead and one half pounder were observed in this section. The majority of these fish were seen in main channel pools associated with bedrock. Occasionally, adults were observed in bedrock chutes or plunge pools.

307 adult  
119

Reach G

Reach G begins at Keystone Flat and extends .5 miles downstream to the Hobo Gulch Campground. Three adult steelhead were observed in one main channel pool.

3 adult

Reach H

Reach H begins at Hobo Gulch Campground and extends approximately 1.25 miles downstream. Thirty-two adult steelhead trout were observed in this section. It was noted that the pool immediately below the Hobo campground stream access had filled in with fines and small gravels. In the past it was difficult to dive to the deepest portion of this pool to see under a huge boulder. In the 1995 snorkel, one steelhead was observed next to the boulder in this pool. The greatest depth was between three and four feet with no cover available under the boulder.

32 adult

Reach I

Reach I is approximately 1.5 miles long and terminates just downstream of Norway Gulch. One hundred sixteen adult steelhead trout and one adult chinook salmon were observed.

116 adult

Reach J

Reach J is approximately 1.25 miles long and extends to Raymond Flat. Seventy-four adult steelhead and one salmon jack were observed in this section. No adult salmon were observed.

74 adult

Reach K

Reach K begins at Raymond Flat and extends approximately 2.5 miles downstream to the Waldorf trail crossing. One hundred thirty-four adult steelhead trout, seven adult chinook salmon and three jacks were observed in this section.

137 adult

Reach L

Reach L extends approximately 2.5 miles downstream. Twenty-three adult steelhead trout, two adult chinook salmon and two jacks were observed in this section.

23 adult

Reach M

Reach M extends approximately 3.25 miles downstream to the confluence of the North Fork Trinity with the mainstem Trinity River. Six adult steelhead trout, twenty-five adult chinook salmon and nine jacks were observed in this section.

31 adult

Summary

A total of 828 adult steelhead were observed in the entire North Fork of the Trinity River; 443 above Hobo Gulch and 385 below this campground. A total of 35 chinook Salmon were observed during the 1995 snorkel survey. These were all located downstream of Hobo Gulch. Three half pounders and fifteen jack salmon were also observed. The North Fork Trinity water temperatures ranged from 49.7°F (52.6°F, air) to 62.2°F (75.3°F, air) during this snorkel survey. The total number of adult steel head decreased from 990 in 1994 to 828 in 1995. The total number of adult chinook salmon increased from one in 1994 to

thirty-five in 1995. It would be interesting to document the fall and winter runs on this Tier I Key Watershed stream.

During 1995, water flows were significantly higher than the previous drought years which may explain greater upstream adult fish populations. During the survey, flows of the larger tributaries were noticeably higher with more pools evident. However, few of these tributary pools had great depth to them. As in past years, the greatest concentrations of fish were located in the deepest pools. Though adult fish were found in a variety of habitat types, main channel pools were most commonly used. Habitat degradation (pools filled with fines and gravel) from high winter flows was noted above Hobo Gulch. In pools where large numbers of fish had been seen in previous years, alternate nearby pools were utilized. In one particular main channel (corner) pool, a log jam had formed downstream, backing up sediments. The jam was not a complete barrier to fish migration. There was not one adult fish in this pool, where many had been seen for three previous years.

Suggestions for next year's survey include staying one more day at the upper reaches (Reaches A-E). This added day would enable the crew to be more thorough in their investigations. An added day on the lower reach would allow time to investigate complex habitat areas more completely. In both areas, some of the deeper pools warrant more snorkel time than is available in a three day survey.

Regardless of the time frame, close coordination of gear delivery to the to the downstream crew (Reaches F-K). Raymond Flat and Waldorf Crossing have been the two drop-off points. It is suggested that the Waldorf Crossing stop be extended because it is a short reach. This may involve some scouting prior to the 1996 snorkel. Steve Decker, Big Bar FMO, the the resident expert on the existing routes.