

1989 REDWOOD CREEK SUMMER STEELHEAD TROUT SURVEY

DATES: July 31, August 1 and 2, 1989

LOCATION: Redwood Creek, Humboldt County, California
Lacks Creek - river mile 28.2 to Bridge Creek - river mile 14.6

DISTANCE: 11.1 miles (17.9 km)

CREW: David Anderson*, Heidi Eberwine, Chris Zimmerman*, Carolyn Meyer, Sabra Steinberg, Bob Coey, and Bruce Kvam
(* Indicates person with prior summer steelhead survey experience)

METHOD: Visual observation by diving with mask and snorkel, and wetsuit top. Survey proceeded in the downstream direction.

ACCESS: Lacks Creek at Stover Ranch on Redwood Valley Road; Panther Creek at K&K road, Simpson Timber Company; Coyote Creek on rehabilitated K&K road; Copper Creek on rehabilitated K&K and 1800 road; Slide Creek/Pig Pen Prairie on 'trail' along rehabilitated 2005 Rd at K&K-RNP road; Bridge Creek along Redwood Creek to Tall Trees trail on eastside.

ITINERARY:	7/31	Lacks Creek to river mile 26.7 (not including Garrett to Panther Creek) Zimmerman and Meyer	1.4 miles	(0 SSHD)
	7/31	Panther Creek to Coyote Creek Anderson and Eberwine	2.3 miles	(0 SSHD)
	8/01	Coyote Creek to Copper Creek Anderson, Zimmerman, Eberwine	2.8 miles	(0 SSHD)
	8/01	Copper Creek to Pig Pen Prairie (just south of Slide Creek) Coey, Meyer, Kvam	1.9 miles	(0 SSHD)
	8/02	Pig Pen Prairie to Bridge Creek Anderson, Zimmerman, Steinberg	2.7 miles	(0 SSHD)

TOTAL NUMBER OF SUMMER STEELHEAD TROUT (SSHD) OBSERVED IN 1989: 0

This is the 9th consecutive summer steelhead trout survey of Redwood Creek, the first in 1981. This year's count of 0 summer steelhead was the lowest observed (Table 1). It rained the first day of the survey. Only 37 percent of the Lacks Creek to Panther Creek reach was done because of the cold conditions and the danger of hypothermia. The divers did walk the rest of the reach and sighted no fish. The last reach of the survey, Pig Pen Prairie Creek to Tom McDonald Creek, was only surveyed as far as Bridge Creek because of the approaching evening. Though the entire 16.1 mile index reach was not surveyed, the best habitat was, those sections in the middle of the index reach.

Though no summer steelhead were observed, a 30 cm fresh carcass of a steelhead was found between George Creek and Garrett Creek. In the Coyote Creek to Copper Creek reach, a half-pounder steelhead, a 14" steelhead, and a beaver were observed. In Redwood Creek at Copper Creek, 0+ coho were observed. Between Slide Creek and Bridge Creek; 3 steelhead (1 @ 14", and 2 @ 12") in a 5'D x 40'W x 80'L pool at the head of the cascade, one 14" steelhead in a 10'D x 25m L pool, and one 10" steelhead in a boulder pool were observed. Six otters were observed in the pool downstream of Bridge Creek.

Table 1. Numbers of Summer Steelhead Trout (SSHD) observed 1981 through 1989 in the 16.1 mile index section of Redwood Creek from Lacks Creek to Tom McDonald Creek, Humboldt County, California.

Year	No. of SSHD	Survey Dates
1981	16	8/10 - 13
1982*	2	10/12 & 14
1983	5	8/22 - 25
1984	44+	8/08 - 10
1985	44+	8/20 - 22, 9/4
1986	19+	8/25 - 27
1987	14	7/14 - 16
1988	8	7/26 - 28
1989**	0	7/31, 8/1 - 2

* Survey from Stover Creek to Emerald Creek, 14 miles, covering most of index section and best pool habitat.

** Survey from Lacks to Bridge Creek, 11.1 miles, minus Garret to Panther Creek. Does not include Bridge to Tom McDonald Creek. Covers best pool habitat.

Water temperatures in mainstem Redwood Creek ranged from 16.5°C (at 1045) to 21.0°C (at 1640) (Table 2). The temperatures were between 16.5 to 18°C in the morning and increased to 19.0 to 21.0°C in late afternoon. The cooler temperatures of 16.5°C, occurred during the rain storm, but generally in the summer, water temperatures in Redwood Creek are warmer. Temperatures of water entering Redwood Creek from the east and westside tributaries ranged from 12.0°C (Panther Creek at 1045) to 20.0°C (Copper Creek at 1640). Except for two eastside tributaries, Lacks (@ 18.0°C) and Copper Creek (@ 20.0°C), tributary temperatures were cooler than mainstem Redwood Creek. Westside tributaries were cooler than eastside tributaries, a pattern seen in earlier research. The mean water temperature of westside tributaries was 15.0°C (n=15, std. dev.= 0.9°C, and range, 12 to 15°C), and the mean water temperature of eastside tributaries was 17.1°C (n=4, std. dev.= 2.4, range 14.5 to 18°C). Temperatures in Redwood Creek were high for salmonid fish, above the preferred temperature range reported by Reiser and Bjornn (1979) for steelhead of 7.3 to 14.6°C.

Table 2. Water and Air temperatures (°C) measured during the 1989 Redwood Creek summer steelhead trout survey. Locations are listed south to north. Alignment refers to creek position E = eastside, W = westside, REDW = mainstem Redwood Creek.

Location	Align ment	Date	Time	Water °C	Air °C
Redwood Creek	REDW	7/31	1025	18.0	
Lacks Creek	E	7/31	1025	18.0	
George Creek	W	7/31	1130	12.0	
Redwood Creek (upstrm of George Cr)	REDW	7/31	1130	18.0	
Redwood Creek (upstrm of Panther Cr)	REDW	7/31	1045	16.5	17.0
Panther Creek	W	7/31	1045	12.0	
Unnamed tributary 1	W	7/31	1205	12.0	
Redwood Creek (at unnamed trib 1)	REDW	7/31	1200	16.5	
Joplin Creek	W	7/31	1250	12.0	
Redwood Creek (at Joplin Cr)	REDW	7/31	1250	17.0	
Redwood Creek	REDW	7/31	1510	18.5	
Unnamed tributary 2	W	7/31	1530	13.0	
Redwood Creek (upstrm of Coyote Cr)	REDW	7/31	1555	19.0	
Coyote Creek	E	7/31	1555	16.0	
Redwood Creek (upstrm of Coyote Cr)	REDW	8/01	1138	18.0	20.5
Coyote Creek	E	8/01	1130	15.0	
Redwood Creek	REDW	8/01	1401	19.0	
Redwood Creek (upstrm of Devils Cr)	REDW	8/01	1500	19.5	
Devils Creek	W	8/01	1510	13.0	
Unnamed tributary 3	W	8/01	1615	13.0	
Redwood Creek	REDW	8/01	1645	19.0	
Unnamed tributary 4	W	8/01	1720	12.5	
Redwood Creek (at unnamed trib 4)	REDW	8/01	1720	19.0	
Unnamed tributary 5	W	8/01	1727	12.5	
Redwood Creek (upstrm of Copper Cr)	REDW	8/01	1740	19.0	
Copper Creek	E	8/01	1740	20.0	
Redwood Creek (upstrm of Copper Cr)	REDW	8/01	1100	17.5	
Copper Creek	E	8/01	1110	19.0	
Redwood Creek (above unnamed trib 6)	REDW	8/01	1315	19.0	
Unnamed tributary 6	W	8/01	1230	13.5	
Redwood Creek (above unnamed trib 7)	REDW	8/01	1405	20.0	

Location	Align ment	Date	Time	Water °C	Air °C
Unnamed tributary 7	W	8/01	1405	13.5	
Redwood Creek (above unnamed trib 8)	REDW	8/01	1420	20.0	
Unnamed tributary 8	W	8/01	1420	13.0	
Redwood Creek (above unnamed trib 9)	REDW	8/01	1500	20.0	
Unnamed tributary 9	W	8/01	1500	13.5	
Redwood Creek (above Slide Cr)	REDW	8/02	1330	19.5	23.5
Redwood Creek	REDW	8/02	1400	20.0	
Redwood Creek	REDW	8/02	1615	21.0	
Redwood Creek	REDW	8/02	1640	21.0	
Unnamed tributary 10	E	8/02	1725	14.5	
Bridge Creek	W	8/02	1805	15.0	
Tom McDonald Creek	W	8/02	1925	14.0	
Redwood Creek (at Tall Trees Grove)	REDW	8/02	1925	20.0	

Literature Cited

Reiser, D.W., and T.C. Bjornn. 1979. Influence of forest and rangeland management on anadromous fish habitat in western North America: Habitat requirements of anadromous salmonids. U.S.D.A., Forest Service General Technical Report. PNW-96., 54 pp. Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.