

Field Note

Salmon Creek, Sonoma County

August 26, 1977

Salmon Creek was surveyed on foot and by car by Howard Cunningham, Seasonal Aid, and Alan Baracco, Assistant Fishery Biologist, on August 26, 1977. The survey covered the area from 1/2 mile upstream from Freestone to the headwaters (1/2 mile upstream from Occidental).

The entire survey area was characterized by intermittent pools. An exception to this was a small tributary (T-1) located 1/2 mile downstream from Occidental which was flowing approximately 0.1 cfs into Salmon Creek. At the confluence of T-1 and Salmon Creek several pools up to three feet deep were located. Surface flow continued for several hundred feet. This area offers the greatest potential for Syncaris pacifica habitat if the need arises to transfer them from areas lower in the drainage.

Three cement and flashboard dams were located approximately 1 1/2 miles downstream from Occidental. They do not impede anadromous fish movement at high flows. The upstream limit to anadromous fish movement is a 40' waterfall 1/2 mile downstream from Occidental. This waterfall is also the cause of a partial log jam. Two hundred feet downstream from this waterfall is a 10' waterfall, which is a partial barrier.

No Syncaris p. were seen. Juvenile salmonids were seen 200 yards upstream from the tributary T-1. California roach were present, as well as sculpins (Cottus sp.) both above and below the falls.

Howard Cunningham

Seasonal Aid

Region 3

34

35

Occidental

Salmon Creek

T. 7 N. R. 10 W.

RES.


TRIB. T-1


SMALL
SURFACE
FLOW

3


2

LEGEND

PAVED ROAD 

FALLS 

FLASHBOARD DAM 

SECTION NUMBER 

1 mile

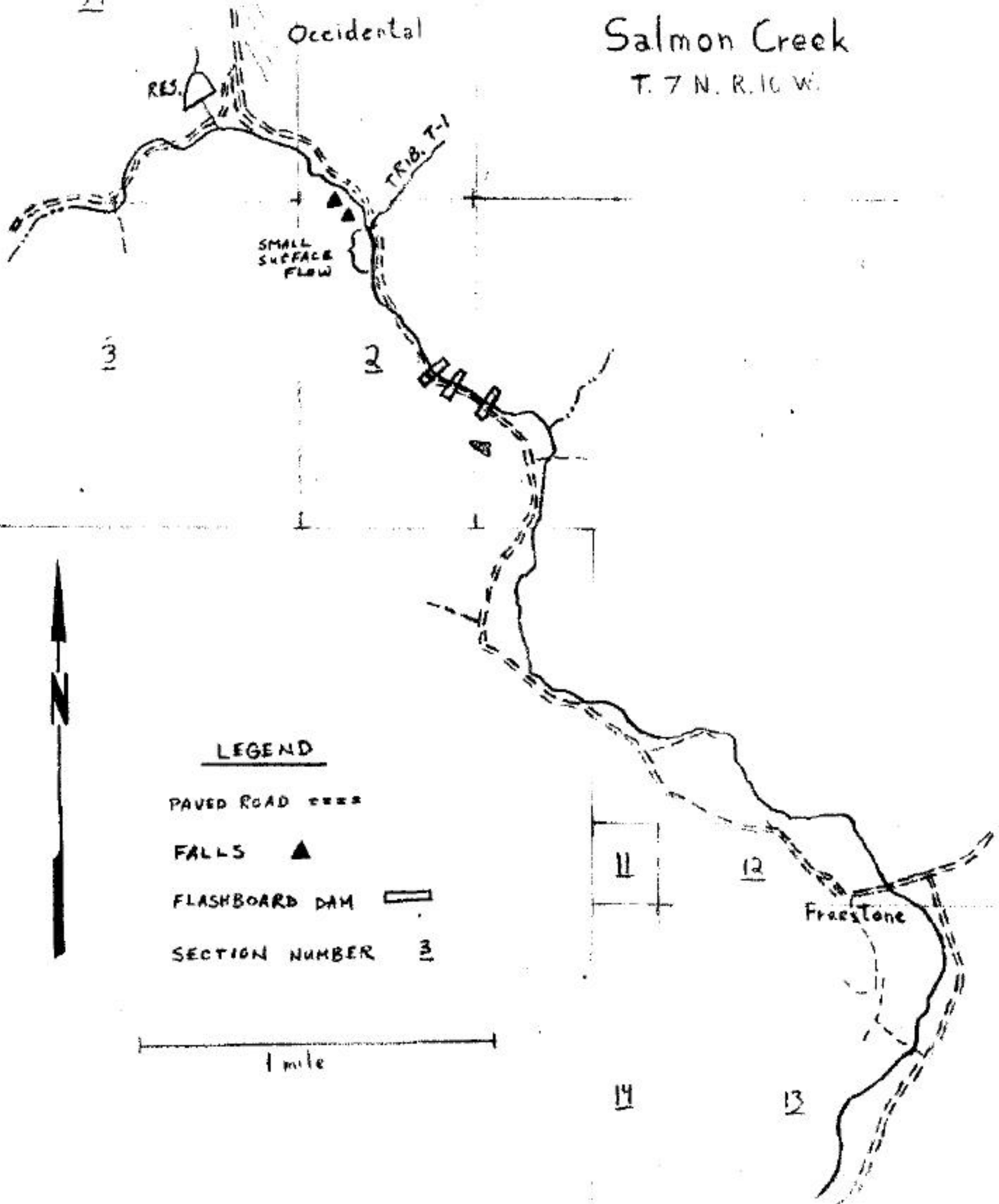
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12

Fractone

14

13



FIELD NOTE

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Sonoma County

On September 19, 1977, Alan Baracco, Howard Cunningham, and Bill Tippets surveyed selected portions of Salmon Creek to determine stream conditions in the area inhabited by the freshwater shrimp, Syncaris pacifica.

The first rain in this area in several months fell on September 17 and 18, 1977. Total precipitation in those two days equaled approximately 1 inch.

Areas observed were as follows:

1. Downstream from the Bodega Highway bridge at the Valley Ford-Freestone Road intersection. Two pools at this location were sampled by dip net for Syncaris but none were found. A few threespined stickleback and roach were present. Rain the preceding two days caused the pools to enlarge somewhat (the stake established as a reference marker in one of the pools was in 3 inches of water) but there was no surface flow. Air temperature was 59 F, water temperature 59°F at 0900 hours.

2. An area one-half mile in length opposite Watson School. Surface flow was present in this reach (visually estimated at 0.2 cfs), supplied from a large pool several hundred yards upstream of Watson School and the unnamed tributary entering Salmon Creek from the north at Watson School. Water temperature was 59°F, air temperature was 60° F at 1030 hours. Dissolved oxygen was measured at 4.0 ppm and pH was 7. No Syncaris were found, although the large size of pools in the area precluded effective sampling with dip nets.

3. A pool approximately one-half mile above Bodega. There was no surface flow in this area. The reference stake in the pool was in 12 inches of water. Syncaris, threespined stickleback and California roach were abundant. A total of approximately 600 Syncaris were removed from this pool. Two hundred were transported in plastic garbage cans with aeration to Bodega Marine Laboratory and placed in glass aquaria by Dr. Michael Hartman. The remaining 400 shrimp were transported to Silverado Field Operations Base near Yountville and placed in a redwood tank. No mortality was observed in shrimp transported to either location.

Observations at 1400 hours the following day (September 20, 1977) confirmed that Syncaris were doing well in the redwood tank. At that time water temperature was 70°F, dissolved oxygen was 9 ppm and pH was 9.

Syncaris on hand at Silverado Base will be re-introduced to Salmon Creek as soon as streamflow increases and water quality is satisfactory.



Alan Baracco
Assistant Fishery Biologist
Region 3

AWB/klS

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Stream conditions in Salmon Creek were observed on foot at several areas by Howard Cunningham on October 14, 1977. The water level in pool #12 (0.2 mile above Watson School) had dropped approximately 4 inches from its level on September 19. The water level in pool #2 (0.1 mile below Freestone-Valley Ford Road bridge) had not changed significantly. The water level in the stream upstream from Watson School had decreased, but a continuous flow was still present.

Howard Cunningham
Fish and Wildlife Seasonal Aid
Region 3

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The Syncaris pacifica which have been held at the Silverado Field Operations Base since September 19, 1977 were returned to Salmon Creek on November 7, 1977. The shrimp appeared to be in good condition. Some gravid females were observed. All shrimp were released near Watson School, throughout a 300-foot section of the stream. There was some surface flow through the area of release. No shrimp mortality was observed.

Howard Cunningham
Fish and Wildlife Seasonal Aid
Region 3