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Marine Resources Branch

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SINGLEY POOL CREEL CENSUS, EEL RIVER, HUMBOLDT COUNTY, 1966 ^{1/}

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SUMMARY

A creel census was conducted at Singley Pool in the Eel River Estuary of Humboldt County from October 1 to November 14, 1966. The objectives of the study were (1) to determine the total catch of king salmon (Oncorhynchus tshawytscha) and (2) to determine if the total catch from this popular fishing area was of sufficient magnitude to adversely affect the Eel River king salmon run.

The results of the study showed that 2,572 king salmon and 731 steelhead (Salmo gairdnerii gairdnerii) and two silver salmon (O. kisutch) were caught during the census period.

It is concluded that the total king salmon catch at Singley Pool is not great enough to adversely affect the king salmon resource of the Eel River.

(Complete report available upon request.)

^{1/} Marine Resources Administrative Report No. 68-2.

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INTRODUCTION

Singley Pool is one of the most popular salmon fishing areas in the Eel River Estuary (Figure 1). Each fall, large numbers of fishermen concentrate there to fish for king salmon. Because of this heavy use, Region 1 personnel conducted a creel census at Singley Pool during the fall of 1966. The objectives of the census were to determine the total catch of salmon and also determine if the total catch was of sufficient magnitude to adversely affect the king salmon resource of the Eel River.

DESCRIPTION OF AREA

Singley Pool is located six miles upstream from the mouth of the Eel River (Figure 2). The pool measures approximately 1,500 feet in length, 150 feet in width, and is affected by tidal action.

Salmon congregate there prior to the first winter storms. Because of this concentration of fish and easy angler access, many fishermen favor Singley Pool over other areas on the lower Eel River.

METHODS

The census was initiated on October 1, 1966 and conducted daily through November 14, 1966. Angler interviews and use counts were conducted each day. Shore anglers fishing both banks of the pool were checked. Boat anglers were contacted as the boats were landed. Use counts were made every two hours, with the first count at 0700 and the last at 1700. Two teams of one man each were used on an alternating basis to conduct the creel census.

The estimated total catch was derived by multiplying the catch per hour by the total estimated angling hours.

The census data and estimates of use and catch were summarized by weekly periods.

RESULTS

Census clerks checked a total of 8,970 anglers. Shore anglers fished 26,273.5 hours to catch 942 king salmon and 273 steelhead. Boat anglers caught 154 king salmon and 28 steelhead in 2,348.5 hours of fishing. Shore anglers caught the only two silver salmon recorded during the census.

The weekly catch per hour for king salmon ranged from 0.021 to 0.045 for shore fishermen and from 0.021 to 0.179 for boat anglers (Table 1). The weekly catch per hour for steelhead ranged from 0.005 to 0.022 for shore anglers and from 0.0 to 0.022 for boat fishermen (Table 2).

The total estimated catch of king salmon was 2,572, with shore fishermen catching 2,010 and boat anglers 562.

Steelhead anglers caught an estimated 731 fish -- 634 from shore and 97 from boats.

DISCUSSION

A small number of king salmon were caught prior to the initiation of the census on October 1. The first salmon usually arrive at Singley Pool in mid-September but do not appear in large numbers until early October.



FIGURE 1. Angler concentration at Singley Pool, October 1966.
Photo by David K. Hoppe, Humboldt Newspapers.

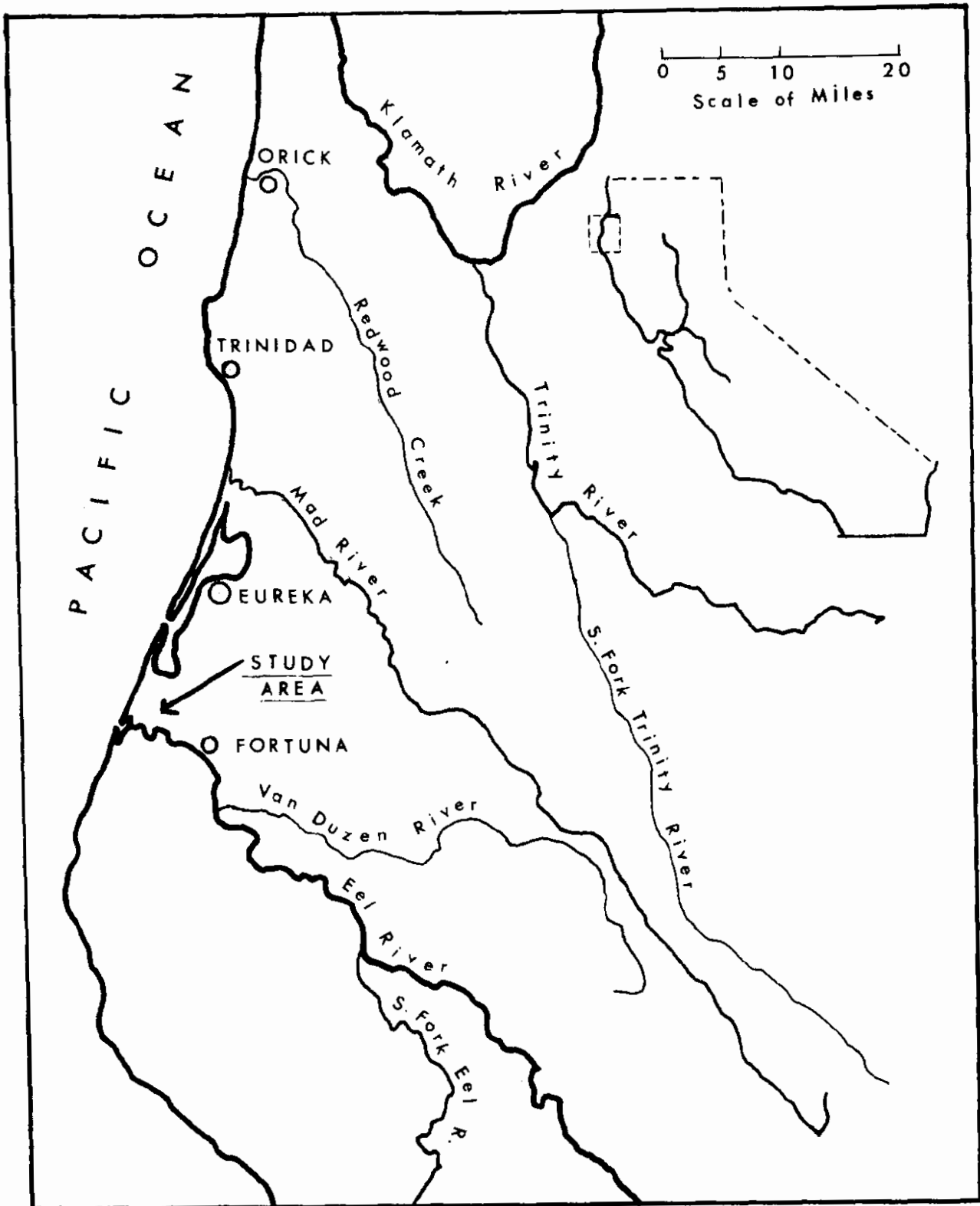


FIGURE 2. Map showing study area.

TABLE 1

King salmon angling effort and catch

Singley Pool, Leel River, 1966

Weekly period	Angler hours sampled		Catch of anglers sampled		Catch per angler hour		Estimated total angler hours		Estimated total catch			
	Shore	Boat	Shore	Boat	Shore	Boat	Shore	Boat	Shore	Boat	Total	
10/ 1 - 10/ 7	925.0	180.0	39	7	46	0.042	0.039	2,666	306	112	12	124
10/ 8 - 10/14	6,961.0	285.0	145	51	196	0.021	0.179	9,049	1,191	190	213	403
10/15 - 10/21	3,732.5	283.0	128	32	160	0.034	0.113	9,768	1,209	332	147	479
10/22 - 10/28	3,113.0	239.5	140	7	147	0.045	0.021	9,334	1,143	420	24	444
10/29 - 11/ 4	4,120.5	414.5	180	20	200	0.044	0.048	10,686	1,449	470	70	540
11/ 5 - 11/11	5,376.5	549.0	243	29	272	0.045	0.053	7,874	1,404	354	74	428
11/12 - 11/14	2,045.0	297.5	67	8	75	0.033	0.027	3,998	813	132	22	154
Totals	26,273.5	2,348.5	942	154	1,096			53,366	7,605	2,010	562	2,572

Anglers interviewed

8,970

Average angler day

6 hours

Greatest instantaneous angler count - October 16 at 1100

243 shore - 36 boat

Silver salmon

2

1/ The estimate of total angler hours was derived by multiplying the total use count by two (two-hour count interval).

TABLE 2

Steelhead angling effort and catch ^{1/}

Singley Pool, Fel River, 1966

Weekly period	Angler hours sampled		Catch of anglers sampled		Catch per angler hour		Estimated total angler hours ^{2/}		Estimated total catch		
	Shore	Boat	Shore	Boat	Shore	Boat	Shore	Boat	Shore	Boat	Total
10/ 1 - 10/ 7	925.0	180.0	18	4	0.019	0.022	2,666	305	51	7	58
10/ 8 - 10/14	6,961.0	285.0	49	5	0.007	0.018	9,040	1,191	63	21	84
10/15 - 10/21	3,732.5	283.0	82	5	0.022	0.018	9,768	1,299	215	22	237
10/22 - 10/28	3,113.0	339.5	56	6	0.018	0.018	9,334	1,143	168	19	187
10/29 - 11/ 4	4,120.5	414.5	29	8	0.007	0.019	10,686	1,449	74	28	102
11/ 5 - 11/11	5,376.5	549.0	27	0	0.005	0.0	7,874	1,404	39	0	39
11/12 - 11/14	2,045.0	297.5	12	0	0.006	0.0	3,998	813	24	0	24
Totals	26,273.5	2,348.5	273	28			53,366	7,605	634	97	731

^{1/} Steelhead catch includes "half-pounders", a local name for steelhead from 8 inches in length to about 3 pounds, in weight.

^{2/} The estimate of total angler hours was derived by multiplying the total use count by two (two-hour count interval).

The census was ended on November 14 because of high, turbid waters. Once the water rose and became turbid, anglers ceased fishing. The lower river remained in an unfishable condition into January by which time the major king salmon run had ended.

The insignificant catch of silver salmon was due to the silvers migrating later than the kings.

Creel censusing at Singley Pool was conducted with ease. There was easy access for census takers on both banks of the pool. However, on occasion, low heavy fog precluded census clerks from making use counts. Periods of low fog were experienced during the early morning or evening hours.

It is interesting to note that the census clerks observed 43 percent of the estimated catch of king salmon. This high percentage ratio shows the ease of sampling.

METHODS OF ANGLING

Singley pool fishermen used several methods for taking salmon. The most popular method was spin fishing with a silver wobbler-type lure known as a "Kastmaster." The popular 1-1/2 oz. size was effective for both legal and illegal fishermen. Less popular but still effective were: anchovies or shrimp fished from a bobber or on the bottom; roe fished on the bottom; flies, trolled or cast; glo-puppy lures, fished in the early morning or evening; various spinning lures, spinners and night crawlers.

An activity that was a problem for wardens and unpopular with many fishermen was the intentional or unintentional "snagging" of salmon with heavy spinning lures. One salmon that was legally hooked and landed had seven Kastmasters hooked to various parts of its body. A small segment of anglers, knowing that large fish were present, reverted to snagging to catch fish. Other anglers who unintentionally snagged a fish could not resist the temptation to keep it. Wardens made several arrests, and census takers required fishermen to return the foul-hooked fish.

EFFECT ON KING SALMON RESOURCE

The results indicate that anglers caught a considerable number (2,572) of king salmon. However, it is my opinion that the resource is not being adversely affected by the Singley Pool fishery. This belief is based upon:

- (1) The abundance (exclusive of catch) of king salmon for the Eel River system is estimated to be 55,000 (California Fish and Wildlife Plan, Vol. III).
- (2) Unpublished records of the Benbow Dam Counting Station, located on the South Fork Eel River, show that 5,647 king salmon passed through the ladder during November 1966. These fish probably had been subjected to the Singley Pool fishery. The Benbow count represented only a portion of the entire Eel River System.

STEELHEAD FISHERY

The steelhead catch consisted primarily of "half-pounders" (8 to 20 inch fish) but a few large fish (8 to 10 lbs.) were caught. A few anglers fished specifically for "half-pounders", but most steelhead were taken incidentally while fishing for king salmon.

REFERENCES

California Department of Fish and Game. 1965. California Fish and Wildlife Plan, Vol. III Supporting Data Part B, pp. 380-385.