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SUMMARY
SILETZ RIVER SUMMER STEELHEAD INVESTIGATIONS

Steelhead Conference
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HISTORY

Only short coastal stream with native populations of summer steelhead.

The summer run was verified by Commission personnel around 1940, but it was 1954 before an angler-caught fish was observed by a biologist.

RIVER CHARACTERISTICS

Physical

The Siletz River heads in the Coast Range near Valsetz, and flows 80 miles before entering the ocean at Taft. From the headwaters to RM 52, the stream grade is moderate to severe as the river flows through mountainous terrain. Below RM 52, the river passes through pasture and farm lands of the Siletz Valley.

Flows

Low summer flows generally range from 75 to 125 cfs, whereas winter maximum flows approach 30,000 cfs at the U.S.G.S. recording station located at RM 41.

Water Temperatures

Generally run in 60's, but ~~do~~ reach low 70's in midsummer. A thermograph located at RM 48 (Logaden) recorded temperatures exceeding 70° F. on 20 days between March 3 and October 10, 1963. Maximum temperature recorded was 73° F.

LIFE HISTORY

Movement

Fish enter river late May, June, and July and move to upriver holding holes above RM 60. Movement slows in August and September until arrival of fall rains.

Age

Ninety-four percent of scale-sampled fish reared for 2 years in river before migrating to ocean. About 60 percent of wild fish checked reared 2 years in ocean, and majority of remaining fish were 1's. Most common rearing cycle is 2 fresh-2 salt-1 fresh (5 years old at spawning) for wild fish.

Length-Weight

	<u>Lengths</u>	<u>Weights</u>
One salt hatchery (19.9-26.0)	22.0 inches	(3.0- 6.0) 4.3 lbs.
Two salt hatchery (21.5-29.5)	26.4 inches	(4.5- 9.5) 6.6 lbs.
Two salt wild		(5.0-10.0) 8.1 lbs.

Ninety-three percent of one-salt steelhead are under 24 inches, and 88 percent of two-salt fish exceed 24 inches fork length.

Spawning

Begins about mid-March and extends through April. Most all spawning occurs in North Fork. Winter steelhead spawning peak appears to be several weeks prior to summers.

Fecundity

Females of 2 salt years and more when live spawned at hatchery average 4,000 to 4,300 eggs.

Repeat Spawners

A 2-year span generally occurs between spawning cycles (15 months in ocean and 9 months in river).

STEELHEAD POPULATION TRENDS

<u>Year</u>	<u>Resting Hole Counts</u>	<u>Sport Catch (Punch Card)</u>
1958	63	182
1962	284	373
1966	867	1,235 /1

/1 Catch for 1965; 1966 catch will probably exceed 1,500 fish.

Prior to 1960, the year of first hatchery returns, the summer steelhead population was less than 500 fish compared with an estimated run of 4,000 fish in 1966, of which 90 percent were of hatchery origin.

HATCHERY PROGRAM

History

First adults (26) trapped in river in 1956. First hatchery plant of 25,000 fish released in 1959 with returns beginning in summer of 1960. Fish have been reared prior to release for one or two years at three stations during the last 10 years.

Present Program

About 120 (90 females and 30 males) are trapped at the Siletz ladder in early July and held at Roaring River Hatchery for spawning the following spring. The eyed eggs are hatched at Oak Springs, and reared for one year.

LIBERATIONS

Numbers

During the past 6 years, 50,000 to 60,000 steelhead have been released annually in the Siletz River.

Age of Release

Prior to 1962, all fish were reared for 2 years. From 1962 to 1965, a portion of the plants was yearlings. Beginning in 1966, all steelhead are reared at Oak Springs to yearling size.

Size at Release

The planted fish have ranged from 4.8 per pound to 13 per pound. The best adult returns have resulted from Oak Springs yearlings released at 7 to 8.5 fish per pound in March.

Location of Release

Hatchery fish do apparently return and hold in the area of release. All steelhead were planted at RM 72 until 1964 when a group was released downstream at RM 45. Although only 21 percent of the planted fish in 1964 and 1965 were released in the lower river, just over 90 percent of the steelhead caught in the lower area during the 1966 fall fishery were of the downriver release groups.

CONTRIBUTION OF HATCHERY FISH

Although the number of steelhead released annually has remained the same since 1962, return rates have increased sharply. In 1966, over 90 percent of the population was hatchery fish compared with 58 percent in 1963 and 33 percent in 1960.

It is difficult to compare survival by release groups when no reliable catch or population data are available for annual comparisons; however, with some knowledge of the population changes which have occurred over the past 6 years, the following statements are made in a general nature:

1. Fish reared at Roaring River for 2 years return better than Roaring River yearlings.
2. Fish reared for 2 years have a higher occurrence of returning as one-salt fish.

3. Oak Springs yearlings return better than Roaring River two-year-old fish.
4. Oak Springs yearlings planted in March at 7 to 8.5 fish per pound exceed all other return groups.
5. Summer fish are inclined to hold near or below the area of release.

SPORT FISHERY

No sampling program to determine angler intensity and catch has been conducted on the Siletz River. Punch card data indicate that the summer steelhead catch has increased ten times over 1956. In 1966, the steelhead catch approached 1,500 fish. Best fishing months are June, July, October, and November.