NOTES ON THE 1930 CATCH OF KING SALMON IN KLAMATH RIVER

By John O. Snyder

The migration of King Salmon into Klamath River in 1930 presented an unusual departure from what was previously regarded as a normal size and age group representation. Very small fish were so out of proportion in numbers as to attract the attention of even casual observers. The small fish referred to are known to anglers and market fishermen as grilse or clubs. As a matter of fact they are males, two or three years of age and sexually mature. Grilse will grow no larger, but die after spawning as do all salmon. Three-year females occur in numbers in the Klamath catch, but they are much larger than the males, often comparing favorably in size with the smaller four-year fish.

For several years prior to 1930, the Klamath migrations had been rather carefully observed, mainly through the commercial catches, and we had come to regard the age group representations as fairly constant. It was found that while three-year fish contribute 11 to 15 per cent of the catch, four-year fish constitute the bulk, 63 to 78 per cent. Five-year fish are much less numerous, 10 per cent or more, while there is a small scattering of six-year individuals.

The Commission had an observer, Carleton Rogers, stationed at the mouth of Klamath River during the season of 1930. He examined 1872 fish, so chosen from day to day as to be typical of the catch. They were measured, recorded as to sex, and scales from each were preserved. Later, the writer determined the respective ages of these fishes and reported on the same.

It appeared that approximately 9 per cent of the catch were two-year fish; 49 per cent were three-year fish; 39 per cent, four-year and but 3 per cent were five-year fish.

In casting about for some explanation for the seeming peculiarity of this particular migration, four assumptions presented themselves:

1. Resulting from an increased demand, smaller fish have been accepted by the dealers, and fishermen have employed nets of a smaller mesh in an effort to take them.

2. A swing in the pendulum of variation for which we are unable to assign a probable cause, and which will eventually right itself.

3. The presence of small fish (third-year class) is the result of a particularly successful breeding season in 1927 and as a result a phenomenal harvest of four-year fish may be expected in 1931.

4. A tendency to mature at a certain age is inherited, and consequently when selective nets deplete the older age groups, those which mature early are left to propagate in undue proportion; a possible result of their depletion which in the end will be deleterious to the stock.

* Fish Bulletin No. 24, 1931, Division of Fish and Game of California.
† Fish Bulletin No. 34, 1931, Division of Fish and Game of California, page 135.
Migration of King Salmon into Shasta River

In 1930, the migration of King Salmon into Shasta River in 1930 previously regarded as a large fish were so out of the catch were two-century, four-year and the seeming peculiarity presented themselves: smaller fish have been employed nets of a size which we are unable usually right itself. The size is the result of a 27 and as a result a net was selected in 1931.

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