

AYK REGION
SALMON BOF RPT #2

HIGH SEAS CATCHES OF KING SALMON

A Report to the Alaska Board of Fish and Game

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The report handed you contains much of what was contained in last year's report but also contains more information on recent Japanese and Russian catches and age composition of their catches.

Prior to World War II, the largest salmon catches, including king salmon were made by Japan just off the coast of Russia's Kamchatka Peninsula. After the war the Japanese were prevented from fishing this area and so they began to explore and fish in offshore waters of the North Pacific Ocean. In 1964 the Japanese mother-ship fleet took a record total of 685,000 king salmon taken in offshore waters of the North Pacific. After it was learned that over 1/2 of the 1964 mothership catch was made in the Bering Sea and that the greatest catches were made in the Central Bering Sea adjacent to the abstention line we became concerned over the distinct possibility that considerable numbers of king salmon from Alaska's Bering Sea drainages were taken. Equally disturbing was the fact that less than 3000 king salmon had been tagged and released in offshore waters by Japanese, U. S. and Canadian research vessels during 1955 through 1964. Of this total only about 200 kings had been tagged in the Bering Sea. So today after 12 years of intensive research of high seas salmon, still almost nothing is known about the origin and distribution of king salmon in the North Pacific.

The Japanese catches made this past season will not be released for some time but the results of the 1965 season were released this Fall. In 1965 a total of 184,504 king salmon was taken by the mothership fleet. 115,992 or 63% of the total catch came from the Bering Sea. Unofficial reports show that about 92,000 kings were taken in

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the landbased fishery and when combined with the mother-ship catches gives a total of 276,504 king salmon taken in offshore waters. The mothership fleet fished less gear in 1965 compared to 1964 and the catch per unit of effort for king salmon was also less. Again the largest catches were made in the central Bering Sea.

The areas fished by the mothership fleet varies considerably from year to year. Some years the Bering Sea is extensively fished and others, like in 1962, no effort at all is made in this area. The abundance of red salmon apparently influences this fishing pattern. If large numbers of red salmon are abundant in the Aleutian area, then relatively few boats would venture into central Bering Sea waters where red salmon are generally less abundant. In reference to their 1964 mothership fishery, the Japanese stated that a great deal of effort was put into an extensive search for red salmon fishing grounds but no such special effort was made to catch other species of salmon.

We have received more age information regarding mothership catches as well as Kamchatka catches. Four year olds dominate the mothership catches, 65% in 1964 and 61% in 1965. Five year olds are second in abundance and the other age groups are rarely taken. The Kamchatka age data received covers only the 1961-1964 seasons. 5 and 6 year olds are the most abundant; some years the 5 year olds are the most abundant and other years the 6 year olds are most abundant. By comparison, six year olds always dominate the Yukon River catches with relatively few five year olds and seven year olds following in order of abundance.

The differences in the age compositions of the three fisheries are influenced by differences in fishing gear. For example the mothership catches are taken with gill nets of less than 5 1/2" mesh as compared

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to 8 1/2" mesh used in the Yukon River. The type of gear fished by the Russians is not known.

You remember that last year it was speculated that a poor Yukon River run might occur in 1966 because of the large offshore catches made in 1964. There seemed to be a relationship between a mothership catch made in one year and a Yukon catch made two years later. For example, a large mothership catch in one year was usually followed by a small Yukon River catch two years later and vice versa. It was further advanced that this was because 4 year olds are taken in the mothership fishery while the Yukon fishery is dependent on six year olds. There was a small run of king salmon to the Yukon River in 1966, in fact it was the smallest run recorded during the last six years. The Kuskokwim River received a large run of king salmon in 1966 and this is difficult to interpret since both the Yukon and Kuskokwim run are similar in age composition and run timing. We don't have any information as to the ocean distribution of these two runs.

An interesting figure is the 1965 catch taken from the Kamchatka Peninsula. The Russians took 630,263 king salmon, a catch that was about 5 times that of any previous year. Information regarding the fishing effort of the Russians was not available so we are not sure if the large 1965 catch was a result of a large run, an increase in fishing effort or both. But it is not unlikely that Kamchatka king salmon of the 1960 brood year experienced extra good survival and contributed heavily to the record 1964 mother ship catch as well as the record 1965 Russian catch.

This does not mean that Yukon River and other Alaskan stocks of king salmon are not taken in the offshore fisheries. We are sure that they are. The question is, how many? This question will remain

unanswered until special effort is made to determine the continental origin and distribution of offshore king salmon populations.