

3-2. Food Production and Salmon Growth (Oral-17)

Bias-Corrected Size Trend of Chum Salmon in the Central Bering Sea and North Pacific

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Since 1972, Japanese research vessels have monitored salmon stock condition in the Bering Sea and North Pacific by catching fish using a research gillnet consisting of ten different mesh sizes. Mean fork lengths of chum caught by research gillnet decreased from the 1970s to the 1990s, but recently the trend has been for increasing chum salmon body size. Although the catch efficiency of research gillnets was considered to be relatively constant over a wide range of fish size, recent studies have shown that fish size is biased in catches from multi-mesh research gillnets due to size selectivity of this fishing gear. Surface trawls were the standard fishing gear used to collect salmon in BASIS surveys. We conducted trawl and gillnet operations at the same locations and over a short time interval in the central Bering Sea using the research vessels *Kaiyo maru* and *Wakatake maru* to compare fish sizes caught by the two fishing gears. A bias-correction coefficient for chum salmon size was obtained from an estimation of size selectivity based on the two gear types. We will apply the coefficient to correct the bias in fork length data collected from gillnet catches, and will test whether temporal trends of corrected and uncorrected chum salmon mean fork lengths are similar.