

3-1. Migration and Distribution of Salmon (Poster-11)

Origin of Juvenile Chum Salmon Caught on the 2007 U.S. BASIS Survey of the Bering Strait and Chukchi Sea Using Genetic Markers

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Chum salmon have a very broad distribution throughout the North Pacific Ocean and Bering Sea during their marine life history stage. They spawn in natal drainages in this area on both continents, with small populations persisting in Arctic rivers. Under the increasingly smaller and thinner Arctic ice cap conditions during summer months, chum salmon populations may expand into both the marine and fresh water environments of the Arctic region. Juvenile chum salmon were collected from the Bering and Chukchi Seas during the U.S. BASIS survey in August-September 2007. We summarize information on the origin of juvenile chum salmon captured from two areas off northwestern Alaska, in the Bering Strait and in the eastern Chukchi Sea, with a suite of microsatellite and single nucleotide polymorphism DNA markers. A genetic mixed-stock analysis with a coastwide baseline was used to identify the regions of origin. These results will provide a better understanding of juvenile chum salmon migration and Arctic habitat utilization.