**Stock specific abundance of Columbia River juvenile Chinook salmon in the Gulf of Alaska**

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Poster

Migration patterns of juvenile Columbia River Chinook salmon (*Oncorhynchus tshawytscha*) differ among stocks and life history types, creating diverse marine distributions of these fish. This results in different stocks being subject to different ocean conditions during their first summer of marine residence, a time that is critical for their survival. Understanding their early marine distributions, and the conditions that may affect their survival, may enhance conservation efforts for these stocks, many of which are protected under the Endangered Species Act. We analyzed juvenile Chinook salmon samples collected in trawls made from 2011-2015 in the Gulf of Alaska, and off the coasts of Washington and Oregon. We used genetic stock identification techniques to estimate stock proportions of juvenile Chinook salmon in each of these areas. Results indicated that the majority of juvenile Chinook salmon in our Gulf of Alaska study area in July originate from Columbia River spring-run stocks. Catch per unit effort (CPUE) over all stocks was correlated between the Gulf of Alaska and the Washington and Oregon coast samples. In 2011, CPUE for Columbia River spring-run stocks in the Gulf of Alaska was lower than for the Washington and Oregon coast, suggesting a differing level of marine mortality that year somewhere between the two areas. We also found a positive correlation between juvenile CPUE of interior Columbia River spring-run stocks in the Gulf of Alaska and adult counts at Bonneville Dam two years later. Our results show that studies like this can provide marine life history, performance and survival information that supports management and recovery efforts for Columbia River Chinook salmon.