17th Annual Salmon Ocean Ecology Meeting, Juneau, Alaska, 29-31 March 2016

Abstract guidelines (please use WORD.doc format):

1. Abstract Title (descriptive but brief).
2. Author(s) name(s) as they should appear on program, affiliation, mailing address, phone number and email address.
3. Name of presenter and contact person if different from first author.
4. Preference for oral or poster.
5. Abstract text (**300 words or less**) should contain a statement of the problem, study objective(s), summary of the methods, major finding(s) and key conclusion(s).

Example:

Does Abundance of Asian Pink Salmon Affect Survival of Bristol Bay Sockeye Salmon?

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Oral presentation preferred

Abstract: The high abundance of pink and chum salmon in recent years has raised concerns that these species may be negatively affecting survival of other species of Pacific salmon. Comparisons of average smolt-to-adult survival between odd- and even-year smolt migrations of Bristol Bay sockeye salmon stocks for smolt years 1977-1997 have been used to infer a strong effect of Asian pink salmon on the sockeye survival rates. However, these comparisons did not take into account the annual variation in abundance of Asian pink salmon. We used time series models and linear regression to examine the impact of Asian pink salmon abundance on marine survival of three important stocks (Kvichak, Egegik, and Ugashik) of Bristol Bay sockeye salmon for smolt years 1977-1997. We also used juvenile salmon data from the Bering-Aleutian Salmon International Survey and corresponding adult returns of Bristol Bay sockeye salmon for smolt years 2002-07 to evaluate the effects of Asian pink salmon in more recent years. For the 1977-1997 smolt years, there was no consistent trend in the survival of the three sockeye salmon stocks, and no net reduction in sockeye salmon smolt survival, in relation to increased pink salmon abundance. For smolt years 2002-2007, average Bristol Bay sockeye salmon returns were higher from even-year smolts, even though odd-year pink salmon they encountered in their first ocean winter were also more abundant. An index of juvenile sockeye salmon survival was higher for even-year juveniles, and was positively correlated with pink salmon abundance. These results are contradictory to the hypothesis that even-year smolts encountering more abundant odd-year pink salmon will have reduced survival due to density dependent interactions. We conclude, based on our results from both time periods, that there is no discernable negative impact of Asian pink salmon on smolt-to-adult survival of Bristol Bay sockeye salmon.