

## Foodweb Dynamics and Trophic Interactions Among Juvenile Pacific Salmon in the Bering Sea Ecosystem

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Current literature suggests climate variability, fishing, carrying capacity, and nutrients as important forces driving the growth and survival during the early life stages of salmon in the ocean. There is still a major gap in our understanding of the foodweb dynamics and trophic interactions among salmonid and non-salmonid species in the marine ecosystems. We hypothesized that if the Bering Sea ecosystem is at its carrying capacity, we should see intense trophic interactions among species, rapid ontogenetic niche shifts as a function of size within species, and significant diet overlaps among species. As a part of BASIS project, we analyzed stable isotopes of N and C of over 8,000 samples for 5 salmon species, forage fish species and zooplankton collected over three years from 182 stations along north-south and east-west transects covering over 36,000 square miles of the Bering Sea ecosystem. We presented results showing significant inter-annual variability in diet overlaps and trophic interactions among salmon species, and trophic shifts within each of the species as a function of body size, which seemed to vary significantly from near-shore to off-shore zones, and discussed their implications for growth, survival and productivity of salmon.