

3-3. Feeding Habits and Trophic Interaction (Poster-19)

## **Winter Food Habits of Chinook Salmon in the Eastern Bering Sea**

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Winter is a critical period for ocean survival of salmon. Although BASIS research was not conducted in winter, sampling by the U.S. North Pacific Groundfish Observer Program (NOAA Fisheries) provided the first data on winter food habits of Chinook salmon in the eastern Bering Sea. Stomach samples, scale samples, and associated catch and biological data collected by U.S. observers from January to March and July to August 2007 were analyzed. Results showed the proportion of empty stomachs was higher in winter (45%) than in summer (8%), indicating winter starvation of Chinook salmon. We discovered that some Chinook salmon feed in winter on walleye pollock offal (cut fins, bone, skin, etc.), presumably discarded by at-sea groundfish processors. The most common natural food of Chinook salmon in winter was squid. Diversity of squid species in Chinook salmon diets was higher in winter than in summer, when more fish (particularly, juvenile walleye pollock) were consumed. Additional seasonal-, spatial-, age-, size- and maturity-related patterns of prey utilization by Chinook salmon in the eastern Bering Sea will be discussed and compared to results of BASIS research.