

3-3. Feeding Habits and Trophic Interaction (Oral-25)

Lipid Content of Immature Chum Salmon in the North Pacific Ocean and Bering Sea

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Prey amount and climate change would affect the trophic status of salmon in the marine stage of their life history. Trophic status of salmon may be useful to understand the state of organisms and populations. In this study the total lipid contents of immature chum salmon were measured for estimating their trophic status. Total lipid contents were decided using Torry fish fat meter (Distel Co.) which is non-destructive microwave fat: water content meter and the Bligh Dryer method with chloroform and methanol. The lipid contents of 4,746 immature chum salmon were measured. The salmon were captured in the Bering Sea and North Pacific Ocean in the summer of 1998-2007, the fall of 2002-2003, the winter of 1998, 2006, and the spring of 2006. It was shown that the total lipid content increased in both of summer and fall and considerably decreased in winter. In same season, the total lipid content showed a difference between places and years. These results were the same regardless of the method. Their trophic status could be variable according to their ocean habitats related with ocean climate change. Total lipid content can be used as their condition marker and long-term trophic monitoring should be valuable in salmon research.