

3-3. Feeding Habits and Trophic Interaction (Keynote-3)

## **Review of BASIS Food Habits Studies and Considerations on Continuing and New Research Directions**

N.D. Davis\*<sup>1</sup>, A.V. Volkov<sup>2</sup>, A.Ya. Efimkin<sup>2</sup>, N.A. Kuznetsova<sup>2</sup>, J.L. Armstrong<sup>1</sup>, and O. Sakai<sup>3</sup>

<sup>1</sup>*School of Aquatic and Fishery Sciences, University of Washington, Box 355020, Seattle, WA 98195-5020 USA; E-mail, ncdd@u.washington.edu*

<sup>2</sup>*Laboratory of Hydrobiology, Pacific Research Fisheries Centre (TINRO-Centre) 4, Shevchenko Alley, Vladivostok, 690950 Russia*

<sup>3</sup>*National Research Institute of Far Seas Fisheries, Fisheries Research Agency, 5-7-1 Orido, Shimizu, Shizuoka 424-8633, Japan*

An overall BASIS goal is to incorporate oceanographic, salmon migration, growth, feeding, and mortality process in models “to advance our understanding of changes in productivity of salmon populations in the Bering Sea” against a backdrop of forecasted climate-ocean and ecosystem state changes. Studies of feeding habits and species interactions are an important component of future model development as these studies provide a method by which changes in salmon condition and species interactions can be observed. We will review the current state and trends in BASIS food habits studies. The possibility of particular prey items that might be an indicator of salmon feeding condition will be examined. In addition, we will discuss those prey species that may confound future modeling approaches because, from a salmon perspective, they fit more than one ecological role. For example, prey species that are both prey and competitors of salmon, or prey that are both prey and predators of salmon.