

3-1. Migration and Distribution of Salmon (Poster-7)

Reproduction Short-term Vertical Movements of Chum Salmon (*Oncorhynchus keta*) Using a Simple Model

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Vertical movements pattern of chum salmon (*Oncorhynchus keta*) during homing migration were examined using archival tags. Vertical movements through thermocline with a periodicity of less than 1 h were observed in day time in the North Pacific. To examine why this short-term vertical movement was caused, we developed a simple vertical movement model based on the heat budget model. It is assumed that chum salmon have an optimum body temperature and they migrate to relatively high prey density to conserve their body temperature. The model reproduced the short-term vertical movements such as observation. This shows that if the body temperature of chum salmon is in the optimum body temperature, they will be able to obtain the prey in the water which is less than the optimum body temperature.