Juvenile Chum Salmon (Oncorhynchus keta) Migration Timing through Icy Strait from Different Southeast Alaska Hatcheries

Duvernay, Gabrielle

Otsea, Anouk

To determine how the distance from various Southeast Alaska hatcheries to Icy Strait, Alaska affects the migration timing of juvenile Chum Salmon (Oncorhynchus keta), fish were examined from Icy Strait during three different months of 2013: June, July, and August. Thirty fish were examined from each haul resulting in 270 pieces of data. The otoliths were extracted from previously caught and frozen fish to determine which hatchery each fish came from. First, the length and weight of each fish were measured to eliminate fish size as a migration timing factor. Both otoliths were extracted, glued to a microscope slide, and sanded down to expose their markings. Using a microscope, the rings imprinted on each otolith were then counted and the hatchery was identified using the Alaska Department of Fish and Game database. The collection of otoliths presented these hatcheries: Kake (180 km), Neets Bay (425 km), DIPAC (100 km), and Hidden Falls (130 km). The data rejects the null hypothesis that the distance of the hatchery from Icy Strait does not affect the migration timing of juvenile Chum Salmon. We are confident in this conclusion because fish released from hatcheries <130 km from Icy Strait arrived before fish released from hatcheries >130 km away (ANOVA, $p < 0.05$). Experiments like this can provide hatcheries with information to improve the survival rate of fish and help manage fish stocks in certain areas.

Awards Won: