

## **Run timing and abundance of adult salmon in the Tuluksak River, Yukon Delta National Wildlife Refuge, Alaska, 2002**

**Abstract:** A resistance board weir was installed and operated in the Tuluksak River between June 10 and September 10, 2002 to enumerate adult salmon and collect biological data. This project involved a cooperative agreement between the U.S. Fish and Wildlife Service and Tuluksak Native Community. Data collected were used in-season to manage the commercial and subsistence fisheries in the Kuskokwim area.

Water and temperature levels fluctuated during weir operations ranging from 0.29 meters and 8.3°C to 1.05 meters and 15.6 °C. A total of 9,958 chum *Onchorynchus keta*, 1,346 Chinook *O. tshawytscha*, 82 sockeye *O. nerka*, 27 pink *O. gorbuscha* and 11,487 coho salmon *O. kisutch* were counted during the 2002 field season. Coho salmon passage was highest on record for all years of recorded data. In addition to salmon, two Dolly Varden *Salvelinus malma*, seven white fish *Coregonus* and *Prosopium* spp, and five arctic grayling *Thymallus arcticus* were passed through the weir.

Age, sex, and length data were collected from 1,057 chum salmon, 215 Chinook salmon, and 531 coho salmon. Four age classes were identified for chum salmon, six for Chinook salmon, and three for coho salmon. It was estimated that female chum salmon made up 44% of the chum run, female Chinook salmon made up 24% of the Chinook run, and female coho salmon made up 58% of the coho run. In sampled fish, male chum salmon were significantly larger than females for ages 0.2, 0.3, and 0.4 fish and there was a significant difference in age composition between sexes. Female Chinook salmon were significantly larger than males for age class 1.3 fish and there was a significant difference in the age composition between sexes. Coho salmon age compositions did not differ between sexes while mean lengths for 2.1 and 3.1 coho salmon did differ between sexes.

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