

Abstract

Age, Sex, and Length Composition of Chinook Salmon from the 2005–2007 Kuskokwim River Subsistence Fishery

Age, sex, and length (ASL) data were collected from Chinook salmon *Oncorhynchus tshawytscha* harvested during the 2005, 2006, and 2007 Lower Kuskokwim River subsistence fishery to characterize the composition of subsistence harvest. Subsistence fishermen from as many as 30 different households spanning 5 different lower river communities sampled 2,799 Chinook salmon in 2005, 1,917 in 2006, and 2,610 in 2007. Respectively, we were able to determine age for 86%, 88%, and 79% of the total scales sampled each year. Fish were caught with a variety of gillnet mesh sizes, but most were caught in gillnets hung with large mesh web (i.e. ≥ 8 inch; 83.0% in 2005, 91.4% in 2006, and 84.1% in 2007). In 2005, the age composition was estimated to include 5.4% age-1.2 fish, 49.8% age-1.3, 42.7% age-1.4, and 1.8% age-1.5, with females comprising 36.7% overall. In 2006, the age composition was estimated to include 6.3% age-1.2 fish, 35.7% age-1.3, 53.3% age-1.4, and 4.1% age-1.5, with females comprising 42.2% overall. In 2007, the age composition was estimated to include 7.3% age-1.2 fish, 36.9% age-1.3, 52.2% age-1.4, and 2.6% age-1.5, with females comprising 41.8% overall. The lower river harvest accounted for 89%, 87%, and 91% of the 2005–2007 total annual Kuskokwim River Chinook salmon subsistence harvests respectively, and the annual ASL composition derived from the Lower Kuskokwim River samples was applied to the total inriver Chinook salmon subsistence harvest in order to estimate total harvest by age and sex. An estimated 70,393 Chinook salmon were harvested from the entire Kuskokwim River in 2005, while in 2006 and 2007 the estimated harvest was 63,177 and 68,645.

Citation: Molyneaux, D. B., A. R. Brodersen, D. L. Folletti, Z. W. Liller, and G. Roczicka. 2010. Age, sex, and length composition of Chinook salmon in the 2005–2007 Kuskokwim River subsistence fishery. Alaska Department of Fish and Game, Fishery Data Series No. 10-39, Anchorage.