

Abundance and Run Timing of Adult Steelhead in Crooked and Nikolai Creeks, Kenai Peninsula, Alaska, 2008
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Abstract

Fish weirs with underwater video systems were installed and operated in Crooked and Nikolai creeks during 2008 to collect abundance and run timing information for immigrating adult steelhead *Oncorhynchus mykiss*. A combined total of 1,465 steelhead was counted past the Crooked ($N=877$) and Nikolai ($N=588$) creek weirs between 26 April and 5 June. Peak weekly passage in each creek occurred between 11 and 17 May. Age, sex, and length (ASL) information was collected from 116 steelhead returning to Crooked ($N=50$) and Nikolai ($N=66$) creeks. Females comprised (ASL and video combined) 58% (Crooked Creek) and 60% (Nikolai Creek) of the escapement. The average length of sampled fish during 2008 was 636 and 651 mm at Crooked and Nikolai creeks, respectively. Reported ages of steelhead were determined from scale samples collected at Crooked Creek between 2004 and 2006. Ages were comprised of 15 different life-history patterns including variations in smoltification, saltwater residence, and spawning activity. Females comprised 89% of repeat spawners for all years combined. The majority of the steelhead smolted at 3 years (64%) and returned to spawn after 2 years (66%) in salt water. Water temperatures during the 2008 operational periods ranged from 0.6°C to 9.4°C at Crooked Creek and 0.4°C to 6.1°C at Nikolai Creek.