

Comparison of Inconnu Spawning Abundance Estimates in the Selawik River, 1995, 2004, and 2005, Selawik National Wildlife Refuge

Selawik River inconnu (sheefish) *Stenodus leucichthys* were sampled during the 2004 and 2005 spawning migrations using mark-recapture techniques to estimate the current abundance of the spawning population and compare it with the abundance in 1995. The 2004 and 2005 marking events were from mid-July to mid-August and the recapture events were from late August to mid-September. During the marking events, fish were primarily captured with beach seines due to turbid water conditions caused by a large permafrost thaw slump in the upper Selawik River drainage. Water clarity improved with the onset of autumn freezing, so fish were captured with hook and line during the recapture events. The estimated abundance of spawning inconnu for 2004 and 2005 was 23,652 (95% CI = 13,383 – 33,920) and 46,324 (95% CI = 25,069 – 67,580), respectively. The estimated abundance of spawning inconnu in 1995 was 5,990 (95% CI = 4,098 – 7,882), indicating that the spawning population expanded significantly during the 10 year interval. This population expansion is thought to be the result of an episodic recruitment event of young inconnu into the spawning population.

Hander, R. F., R. J. Brown, and T. J. Underwood. 2008. Comparison of inconnu spawning abundance estimates in the Selawik River, 1995, 2004, and 2005, Selawik National Wildlife Refuge. U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office, Alaska Fisheries Technical Report Number 99, Fairbanks, Alaska.