ABSTRACT

Radiotelemetry methods are currently being used to document spawning locations, describe the timing of upstream and downstream spawning migrations, and estimate the spawning frequency of sheefish *Stenodus leucichthys* in the Kobuk River. In each of 2008 and 2009, 150 mature sheefish were captured and radio-tagged from 17 July to 28 August. Five aerial tracking surveys were conducted each year from 23 July to 30 September to locate radio-tagged sheefish throughout their spawning area. Radio-tagged sheefish were located from the Mauneluk River upstream to Beaver Creek. Stationary tracking stations located in Kobuk Village and just upstream were used to record their upstream and downstream migrations before and after spawning. The mean date of downstream passage as determined by the tracking stations was 1 October in 2008 and 29 September in 2009. The mean date of upstream passage in 2009 for sheefish tagged in 2008 was 28 August. The proportion of radio-tagged sheefish that exhibited sequential year spawning was 0.44 (SE=0.04) for all fish, 0.31 (SE=0.06) for females, and 0.61 (SE=0.06) for males. Aerial surveys, boat surveys, and stationary tracking stations will be used to track and document radio-tagged sheefish throughout their spawning migrations in 2010 and 2011. This will provide the required information to estimate spawning frequency of sheefish in the Kobuk River.

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