Spawning Distribution and Migratory Timing of Kuskokwim River Sheefish

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“I have placed along with the white-fishes that magnificent species, the finest of all the fishes closely related to Coregonus the Inconnu of the McKenzie and Yukon regions. This well-flavored species grows to four feet in length and is known to have reached fifty pounds in weight.”

The White Fishes of North America
By Tarleton Bean, M, .D., M.S.
Curator of the Department of Fishes in the United States National Museum
Transactions of the American Fisheries Society, Volume 13/Issue 1, January 1884
Cooperators

• Project funded through OSM
• Cooperative project with Ken Harper’s (USFWS) OSM study, Telemetry studies of humpback and broad whitefish in the lower Kuskokwim River.” Share stationary receiving stations and aerial survey costs.
• Study performed in cooperation with the Kuskokwim Native Association.
Objectives

MAIN
- Document spawning stocks and spawning locations of sheefish the Kuskokwim River drainage.

SECONDARY
- Determine the migratory timing of mature sheefish to their spawning, overwintering, and feeding areas;
- identify specific summer feeding areas used by known spawning stocks; and,
- collect tissue samples from all radio-tagged sheefish for future genetic stock identification analysis.
Cumulative Percent Frequency

Upriver Migration Recorded at Tracking Station near Aniak

Date

2009
2010
Spawning Area Criteria

A sheefish that moves upstream after tagging will be deemed as on a spawning area if it meets one or all of the following criteria:

1. It is located during the likely time of spawning;
2. it is located in habitat consistent with spawning areas described by Alt (1987);
   - Swift to moderately swift current
   - Differentially sized gravels
   - Water temperature near 0°C.
3. it is located in close proximity to one or more other radio-tagged sheefish; and,
4. it is located among a large aggregation of fish that are sighted from the air.
Capture Sheefish at Spawning Areas inferred from locations of radio-tagged sheefish and examine spawning readiness

Record habitat characteristics such as temperature, pH, flow, substrate, and turbidity
Keep on Trackin’
Determine status of the sheefish in the vicinity of Highpower Creek by:

• Documenting the locations of radio-tagged sheefish during the spawning period; and,

• Determining the migratory timing and seasonal distribution of radio-tagged sheefish.

Conduct site visits and capture sheefish to assess spawning condition on suspected spawning areas on the East Fork, Kongeruk, and Swift rivers. Collect tissue samples from each sheefish captured for future genetic stock identification analysis.

Describe habitat characteristics of the areas used for spawning.