

## **Beaver dam influence on fish in lentic and lotic habitats in the Black River drainage**

**Abstract:** During summer 2000, fish distribution patterns were examined in three oxbow lakes with beaver dams across outlet streams, as well as in the adjacent river in interior Alaska. Sampling was conducted with 5 cm and 11 cm stretched mesh gillnets on three occasions; mid-June, late July, and mid-September. All fish captured were measured, weighed, and sexed. Feeding condition was noted for all fish and stomach contents of feeding fish were identified when possible. Otoliths were collected for age estimation. Electronic stream gauges recorded the time and duration of high flow events that allowed fish passage over beaver dams. A total of six fish species were captured during the project. Northern pike, humpback whitefish, least cisco, and broad whitefish made up more than 98% of the catch. A single inconnu, a single Arctic grayling, and two individuals of a hybrid whitefish form were also captured. Two additional species, longnose sucker and Arctic lamprey, were identified in northern pike stomachs. Adults of the four primary species were captured in lentic (lake) and lotic (flowing water) habitats. Juveniles were captured in lentic habitat only. Relative fish abundance, based on catch-per-unit-effort, was different among study lakes, and was greater in lentic than lotic habitat. High flows in the drainage provided multiple opportunities for fish to move over beaver dams during the season. These results suggest that fish actively exploit lentic habitat despite periodic restrictions to their movements caused by beaver dams and low flows.

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