

FISHERIES STUDIES IN THE NORTH FORK FLATHEAD RIVER DRAINAGE, GLACIER NATIONAL PARK

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Objectives

Our objectives were to identify preferred spawning and rearing areas and to analyze selected population factors in Dolly Varden (*Salvelinus malma*), westslope cutthroat trout (*Salmo clarki*), and mountain whitefish (*Prosopium williamsoni*) populations. These studies are being conducted as part of the Flathead River Basin Environmental Impact Study funded by the U.S. Environmental Protection Agency (EPA).

Methods

Methods used in the North Fork drainage were habitat analysis, snorkeling, electrofishing, and live-trapping. Work in park streams in 1979 was limited due to a concentration of effort on west-side tributaries to the North Fork. However, in August, low-level aerial photography was done on some park streams using the EPA Enviropod Method. Creeks photographed included Anaconda, Logging, Quartz, Kishenehn, and Starvation. Flights were made at 600 m altitude, and photos will be in color. At present, we do not have the developed prints but anticipate their return soon.

Results and Discussion

Preliminary analysis of negatives show that results are of varying quality. In some areas, substrate type and pool:riffle run ratios are easily discernible, while in others they are not due to shading or poor focus. When properly adjusted, this system allows for a good view of the riparian zone for about 200 m on either bank. This could be useful for habitat typing and location of beetle-killed trees along streams. This photography is being used in conjunction with on-the-ground stream surveys. Habitat stream-reach surveys, snorkeling, and electroshocking were conducted in west-side tributaries in 1979; the lower end of Akokala Creek was the only park stream surveyed in 1979.

Plans for 1980

A final report for 1979 will be available in February 1980. If proper clearance is obtained from the park, during the coming field season we hope to conduct stream-reach surveys with snorkel transects and electroshocking on parts of Camas, Anaconda, Logging, Quartz, Bowman, Akokala, Ford, Kintla, Starvation, Kishenehn, and Sage creeks. Part of the stream-reach survey will probably be done with aircraft due to inaccessibility of some park streams. When completed, this work, combined with 1979 information, will assist in our analysis of Dolly Varden, westslope cutthroat trout, and mountain whitefish populations in the North Fork drainage from the Canadian border southward, as part of the Flathead River Basin Environmental Impact Study.