

MONTANA STATE DEPARTMENT OF FISH AND GAME
FEDERAL AID IN FISH RESTORATION SECTION
HELENA, MONTANA

JOB COMPLETION REPORT
INVESTIGATIONS PROJECTS

State of Montana

Project No. F-7-R-4

Job No. III-A

Title of Job: Depths of Kokanee Spawning Beds in Flathead Lake

Abstract:

Observations were made of the spawning areas of kokanee in Flathead Lake, during the fall of 1954. Attempts were made in February to collect eggs from the lake bottom with a Peterson dredge. No information was obtained since rocks and debris kept the jaws of the dredge open, allowing all small material to leak from the dredge before it reached the surface.

OBJECTIVES:

It is already known that kokanee (Project F-7-R, Job Completion Report, Job No. III-A, 1953) spawn along the shores of Flathead Lake and that their eggs do hatch out successfully. The maximum depths determined so far had been five feet. The lake fluctuates about 10 feet during the year due to a hydroelectric plant. Since 1938 the water remained at maximum level until the greater portion of the kokanee had spawned. However, since Hungry Horse Dam has been completed and is in operation, the pattern of fluctuations has been altered. The purpose of this study is to determine the extent in depth of kokanee spawning in Flathead Lake.

Techniques Used:

During the spawning season of the kokanee, areas of concentration were observed at Dr. Richards Bay, Rollins Bay and Somers Hatchery Bay of Flathead Lake. Observations of the lake bottom was aided with use of water telescope. A Peterson dredge was used to sample areas after spawning seasons were over.

Findings:

Flathead Lake and spawning kokanee have been described in Job Completion Reports F-7-R-1, -2, -3, Work Plan III-A. Observations were made of the spawning areas of Rollins Bay, Dr. Richards Bay and at Somers Hatchery Bay. No redds were observed in water over 3 feet in depth, in any of the bays examined. In February attempts were made with the Peterson dredge to sample the spawning areas at Somers Hatchery Bay. The lake level at this time was about five feet lower than it was during the spawning season. The dredge would pick up gravel, but the jaws would always be kept open by rocks, allowing small particles to drain out with the water.

At no time were any small particles the size of kokanee eggs brought to the surface. Eyed kokanee eggs were collected along the shore at Dr. Richards Bay above the water level of the lake in seepage area on March 9, 1955.

Analysis and Recommendations:

The equipment at hand was not successful in collecting kokanee eggs from the lake bottom. It is recommended that this job be discontinued.

Summary:

No redds were observed in water over eight feet in depth. Since the Peterson dredge did not operate successfully in gravel, no information was gathered on the depths of kokanee redds.

Data and Reports:

The original data and reports are with the project leader at Kalispell, Montana.

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Approved by _____

Date March 28, 1955