

STUDY PERFORMANCE REPORT

State: Michigan

Project No.: F-80-R-2

Study No.: 669

Title: Prey selection and predation rate of piscivorous fish

Period Covered: October 1, 2000 to September 30, 2001

Study Objective: To estimate survival of juvenile bluegills in ponds as a function of bluegill size and density and predator size and density, and to concurrently measure predator survival and growth.

Summary: As planned, no pond experiment was completed. As planned, predators were reared to use in pond experiments during the 2002 growing season. Walleye fry were stocked into two ponds in April 2001 and these ponds were partially drained in fall 2001 to confirm the presence of juveniles; they reached 90 and 180 mm total length (TL) by October. We are also holding reproducing populations of largemouth bass and bluegill in ponds. There should be adequate numbers of predators to conduct predator-prey experiments during the 2002 growing season.

Job 1. Title: Stock ponds with bluegills and predators.

Findings: Walleye fry were stocked into Pond 16 and Pond 17 at the Saline Fisheries Research Station on April 23, 2001, 1000 into each pond. The fry going into Pond 16 had been marked at Wolf Lake Fish Hatchery using oxytetracycline (OTC). Samples of fish from each pond will be used by Dave Fielder, Research Biologist at the Alpena Fisheries Research Station, as a reference set of OCT-marked and unmarked juvenile walleye for his examination of stocked and wild juvenile walleye caught in the field. In addition to juvenile walleye, other ponds at Saline are holding reproducing populations of largemouth bass and bluegill.

Job 3. Title: Drain ponds.

Findings: On October 2, the two ponds stocked with walleye fry were partially drained to confirm presence of juveniles. Mean length (N = 40) was 180 mm TL in Pond 16, 90 mm TL in Pond 17.

Job 7. Title: Prepare appropriate sizes of predators and prey for next experiments.

Findings: We are holding juvenile walleye and reproducing populations of largemouth bass and bluegill at the Saline Fisheries Research Station. With the additional reproduction that will take place next spring, there should be adequate numbers of fish to conduct experiments during the 2002 growing season.

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Date: September 30, 2001