



Durham Lake Kosciusko County FISH MANAGEMENT REPORT 2001



Department of Natural Resources

Division of Fish and Wildlife

BACKGROUND

Durham Lake is a 6¾-acre natural lake located on the southern edge of the Tri-County Fish and Wildlife Area near North Webster. It lies within a large wetland complex that drains into Lake Webster through the Backwater Marsh Area. A parking area is located on the north shore where anglers can carry-in light boats. Outboard motor operation is prohibited.

Durham Lake has a maximum depth 18 feet. The bottom is mostly muck. Water clarity is good (10_ ft secchi reading). Oxygen levels are normal near the surface (7 ppm), increase to a high level at 10 feet (17 ppm), then decline to a low level at 14 feet (<1 ppm). Aquatic plants are abundant. Coontail and chara are the major submerged species. Spatterdock and water lily are the major emergent species.

There is little previous information on Durham Lake. No known biological inventories have been conducted there by the Division of Fish and Wildlife. However, anglers reported catching large numbers of bluegills through the ice during the 2001 winter. To obtain additional information on the status of the lake, the Division of Fish and Wildlife conducted a fish population survey on July 16-17, 2001. Total sampling effort consisted of 17 minutes of DC electrofishing around the shore, one gill net lift and one trap net lift. The results of the survey are presented in this report.

SURVEY RESULTS

During the survey 88 fish weighing 21 pounds were collected. Only 40 fish were captured by electrofishing. Eleven species were present. Golden shiners accounted for half of the number and 12% of the weight. They were 2-7½ inches long. Pumpkinseeds ranked second by number (11%) but made up only 4% of the weight. They were less than 5¼ inches long. Seven black crappies from 2½-9½ inches long were collected. Other sport fish included five yellow perch up to 9 inches long, five yellow bullheads, three bluegills, three brown bullheads, 11_-12 inches long, and two warmouth. The largest bluegill was 7 inches. Other fish captured during the survey included six grass pickerel, three lake chubsuckers, and a 28-inch carp that made up 47% of the total weight of the catch. Altogether, sport fish accounted for 28% of the catch by number and 34% of the weight.

MANAGEMENT IMPLICATIONS

Based on results of this survey, there is evidence to suggest that Durham Lake may have experienced a fish kill late last winter during snow and ice cover. Anglers reported catching large numbers of 7-inch bluegills during the early ice-fishing season but very few were present during the time of the survey. The fact that few fish were collected and no largemouth bass were found indicates the kill may have been severe. The relatively low level of oxygen in the surface water, coupled with dense beds of coontail and other plants, increase the likelihood of a winter fish kill. Similar small natural lakes with high organic content in the area also experience winter kills.

With the exception of largemouth bass, the various fish species in the lake will likely rebound under more favorable weather conditions. Consequently, there is no immediate need to restock the lake with species other than largemouth bass. As predators, largemouth bass are important components of the fish community. Therefore, it is recommended that 675 largemouth bass fingerlings be restocked in Durham Lake as soon as possible.

Durham Lake sits within a relatively remote section of Kosciusko County along CR 350N. The road undergoes periodic flooding due to the unstable nature of the substrate and beaver activity. It requires constant maintenance. There are no houses or businesses east of CR925E and along a section that lies in Whitley County (CR 850N) to State Road 5. Traffic on the road is light. Alternative routes through the area on county roads are present one mile north and south of 350N. The Division of Fish and Wildlife owns much of the adjacent upland. Therefore, it is recommended that the portion of road that lies in the wetland be removed to restore the natural character and function of the wetland. Access to Durham Lake would remain open from the west on CR 350N and access to nearby Pisgah Marsh would remain open from the east on CR 850N.

Submitted by: Jed Pearson, fisheries biologist
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