

Pleasant Lake Walleye Management Evaluation (Survey #s: 618702, 618704)

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Pleasant Lake, in southern St. Lawrence County, is part of the Indian River Lakes group in the Oswegatchie River watershed. Surface area is approximately 210 acres with an average and maximum depth of 22 and 32 feet, respectively. It is managed as a cool/warmwater lake with sportfish consisting of northern pike, black bass, and walleye which are stocked annually as fry.

Pleasant Lake was sampled by boat electrofishing the evening of 5/14/18 as part of a Percid Sampling Plan (Forney et al. 1994) study. Shocking on-time was divided between All-fish collections (1 hour) and Game-fish collections (1.5 hours). Approximately 75% of the shoreline was surveyed covering all types of littoral habitats; wetlands, sand flats, bedrock and rock rubble shoreline transitions.

Total catch was dominated by bluegill, pumpkinseed, and largemouth bass, in order of abundance. Sportfish included largemouth bass, smallmouth bass, northern pike, and walleye. Northern pike seemed to be abundant, however, few were collected as they were prone to escapement from the electric field. Only one walleye was collected, indicating that density is low relative to other large predators.

Largemouth bass dominated the sportfish catch, with 49% of the catch being of legal harvestable length (Figure 1). Maximum lengths of largemouth bass and smallmouth bass collected were 20.8 and 18.8 inches, respectively. Northern pike were relatively small averaging 19.2 inches with a maximum of 25.7 inches in total length.

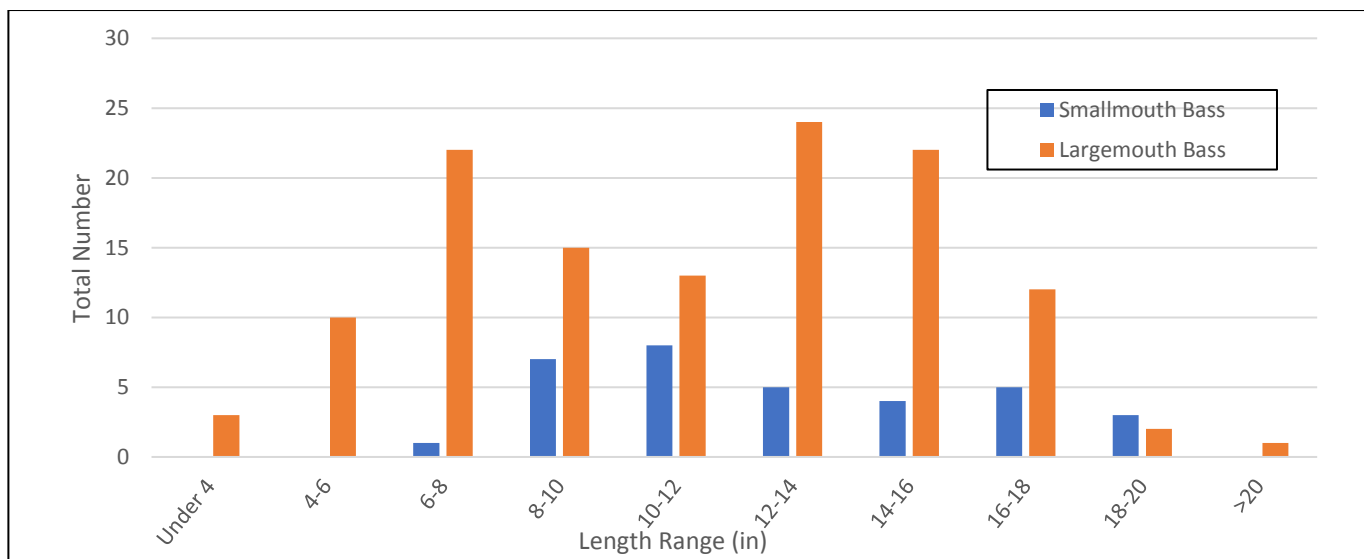


Figure 1. Length ranges for black bass collected with boat electroshocking at Pleasant Lake on 5/14/2018.



Six experimental gill nets were set on 6/19/18 covering available habitat types. A total of 222 fish, comprising 11 species were collected. Northern pike, pumpkinseed, and yellow perch were the most abundant in that order. Black bass were present but in much lower numbers than found with electroshocking (Survey #618702). No walleye were collected with gill nets.

Northern pike were the most abundant species collected at 32.9% of the total catch. Most of the fish (68%) were harvestable under the 18 inch minimum size limit (Figure 2). Fish appeared to be in marginal condition, however, Relative Weight ($Wr = 85$) was comparable to other waters in the region.

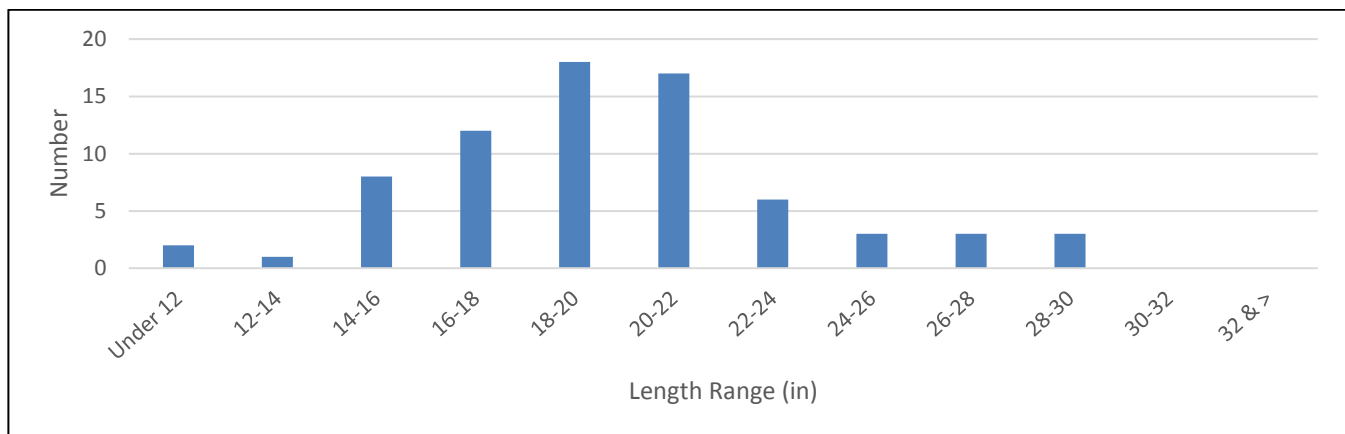


Figure 2. Length distribution of northern pike collected by gill net in Pleasant Lake on 6/19/18.

Six sites were seined for a total of approximately 900 linear feet. Forage fish collected consisted primarily of small sunfish (*Centrarchidae*) with small numbers of banded killifish and bluntnose minnows. Previous surveys identified bridle shiners in the lake, however none were found in this survey.

Walleye fry are stocked at a rate of 660,000 annually. A single fish (20.4") was collected during these surveys. Angler reports indicate that the quality of the walleye fishery is low but consistent, especially in the spring.

Continued fry stocking is recommended for this water. It is unlikely that walleye could become a major sportfish in this water given the high numbers of large black bass and northern pike, however walleye are caught by anglers and do constitute a portion of the overall sport fishery.

Literature Cited

Forney, J. L., G. Rudstam, D. M. Green and D. L. Stang. 1994. Percid Sampling Manual. Chapter 3 in Fish Sampling Manual. NYSDEC, Bureau of Fisheries, Albany, NY.