

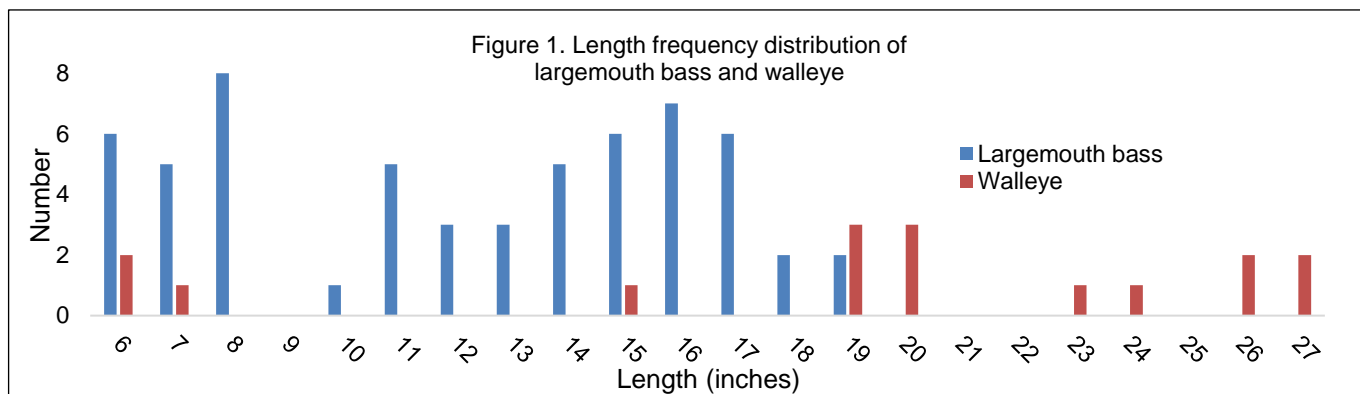
# Annual Fall Canadarago Lake Bass/Walleye Survey (Survey #:417077)

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1/17/2018

Canadarago Lake is a 2,000 acre headwater lake in the upper east branch of the Susquehanna River located in Otsego County, NY. This eutrophic lake supports a diverse assemblage of warmwater sportfish, including walleye, largemouth bass, smallmouth bass, tiger muskellunge and chain pickerel. Yellow perch, sunfish and alewife are the most common forage species. Alewife were first reported in 2006 and have increased in abundance in recent years, negatively impacting walleye recruitment due to fry predation. To maintain the popular walleye fishery, NYSDEC established an experimental stocking program in 2014 comprised of both pond raised and intensively raised (50-day) fingerlings, stocked at 20/acre each. Also, in 2017, the walleye harvest limit was changed from the statewide regulation to 18 in minimum size and 3 fish/day. After a three-year hiatus, annual tiger muskellunge stocking resumed in 2015 to provide additional trophy fishing opportunities. A survey using DEC’s draft revised black bass and sunfish sampling methods was conducted on November 2, 2017 to assess the status of warmwater sportfish populations in the lake, with a focus on black bass and walleye. The survey was a collaborative effort among NYSDEC, SUNY Cobleskill and SUNY Oneonta, comprised of four electrofishing boats, each concurrently sampling ¼ of the lake’s shoreline on a mild evening.

A total of 963 fish and 24 species were collected. The most numerous sportfish was largemouth bass; 78 were collected with a good size distribution ranging up to 19.6 in (Figure 1). The catch rate of largemouth bass  $\geq 12$  in was 6/h (Table 1), which is slightly below the statewide average of 8/h for fall surveys. Largemouth bass were in good condition with weights ranging up to 4.5 lbs. Chain pickerel were also common; 46 were collected and 18 of these were legal size ( $\geq 15$  in). Only six smallmouth bass were collected, the largest of which was 18 in and 3.1 lbs. Sixteen walleye were collected, but only three were stocked young of the year (YY). Adult walleye ranged from 15 – 27 in and the largest was 8.7 lbs. Only one tiger muskellunge was collected – a recently stocked YY fish that was 12.4 in long. Yellow perch, bluegill, pumpkinseed, and rock bass were commonly collected panfish (Table 1).



The largemouth bass population is doing well in Canadarago Lake and should provide quality fishing opportunities for years to come. The black bass fishery will continue to be managed under the statewide fishing regulation. Not enough walleye were collected to determine the status of the population, but the capture of several YY fish in this survey and during a subsequent forage fish gill netting indicate that at least some stocked fish survived. However, the low number of young fish collected is an indication that the high density of alewife in Canadarago Lake continues to impact walleye recruitment. The current stocking program will continue through 2020 and will include annual monitoring. The more protective



special regulation will be maintained for walleye until recruitment to age 3 is improved. Also, despite the lack of tiger muskies in the survey, anglers are occasionally reporting catches and this stocking program will continue. There is also a variety of quality sized panfish that adds to this lake's diverse warmwater fishery. It should be noted that sportfish collections, particularly for walleye and smallmouth bass, may have been affected by clear, calm conditions, and rapid surface water cooling just before the survey, which may have caused these fishes to seek deeper water.

Increased predator stocking in the lake will hopefully reduce alewife numbers and result in a more balanced warmwater fishery for anglers to enjoy. The 2016-2017 ice fishing season was the first since 2010 where a notable number of preferred size yellow perch were being caught, a good sign of positive changes in the fish community. A summer gill net survey scheduled for 2018 is expected to better evaluate the new stocking strategy.

Table 1. Numbers of fish and their length category catch rates for eight fishes captured in Canadarago Lake on November 1, 2017.

Species	Number collected	Time (h)	All sizes	Length category <sup>i</sup> catch rate (fish/hour)			
				YOY	≥Stock	≥Quality	≥Preferred
Largemouth bass	78	5.3	13.7	3.3	8.3	6.0	4.0
Smallmouth bass	6	5.3	1.1	0.4	0.2	0.2	0.2
Chain pickerel	46	5.3	8.1	1.4	4.2	3.2	1.4
Walleye	16	5.3	2.8	0.5	2.3	2.3	1.8
Pumpkinseed	136	1.3	112.6	5.9	80.7	25.2	0.8
Bluegill	124	1.3	98.3	36.1	62.2	17.6	2.5
Yellow perch	219	1.3	174.8	0.8	119.3	36.1	7.6
Rock bass	58	1.3	44.5	5.9	33.6	13.4	9.2



Canadarago Lake survey crews from NYSDEC, SUNY Cobleskill, and SUNY Oneonta, November 2, 2017.

<sup>i</sup> Length categories for sportfish and panfish in Canadarago Lake.

	Largemouth bass	Smallmouth bass	Walleye/ Chain pickerel	Bluegill/ Pumpkinseed	Yellow perch	Rock bass
Stock	≥8 in	≥7 in	≥10	≥3 in	≥5 in	≥4 in
Quality	≥12 in	≥11 in	≥15	≥6 in	≥8 in	≥7 in
Preferred	≥15 in	≥14 in	≥20	≥8 in	≥10 in	≥9 in