

Henderson Lake General Biological Survey #519064: Tom Shanahan, Region 5 Fisheries

03/27/2020

Henderson Lake (UH715) is in the Town of Newcomb in the western part of Essex County. It is a relatively large (235 acres) and deep (70 feet) lake with a dam on its eastern arm. It is in the Upper Hudson watershed and is part of the High Peaks Wilderness. The lake is located just west of the Hudson River at the end of the Tahawus Road and is accessed by a short carry from the parking area to the dam. Henderson Lake was surveyed in 2003, as the parcel was in the process of being transferred from private ownership to Forest Preserve, to collect updated data on the fish community. With the lack of public access, this was the first biological survey since 1932. The survey discovered water temperatures and dissolved oxygen levels suitable for salmonids, but also the presence of several competing fish species. It was decided to try a dual stocking policy of Temiscamie X Domestic hybrid brook trout along with lake trout.

The lake was surveyed in July 2019 to evaluate the salmonid populations using our standard suite of sampling gear: 150' experimental gill nets (3), 30' minnow net and a metal minnow trap. We also set two three-net gangs (1.5"-2"-2.5") that are typically used for lake trout assessment. Lake trout, brook trout and six other fish species were captured (Table 1.). Except for the addition of lake trout, this is an identical species composition to the 2003 survey.

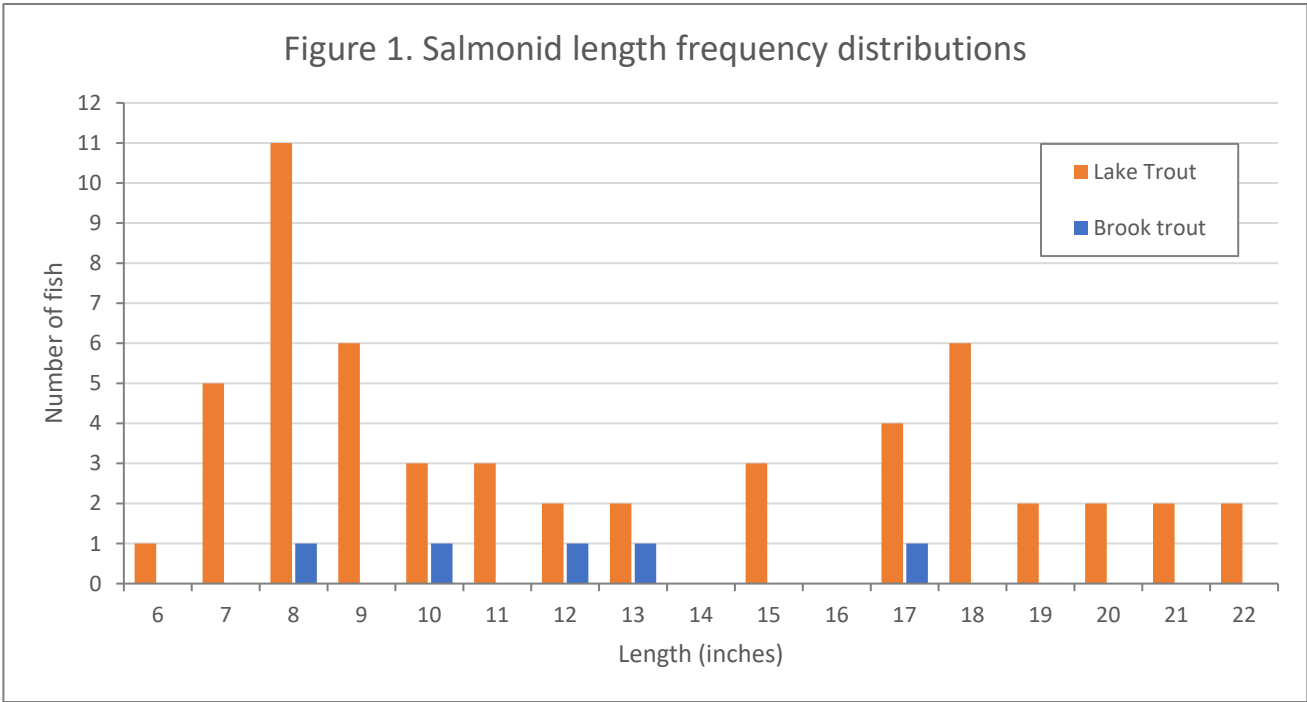
Table 1. Numbers caught and size ranges of fish from Henderson Lake in 2019.

Species	Number caught	Length range (inches)
Brook trout	5	8.2 – 16.5
Lake trout	54	5.7 – 21.7
Common shiner	11	3.7 – 4.0
Creek chub	2	3.7 – 3.8
White sucker	51	6.7 – 18.5
Brown bullhead	26	3.5 – 9.1
Pumpkinseed	5	2.6 – 4.5
Yellow perch	31	2.9 – 12.5

Henderson Lake has very good water chemistry with a pH of 6.8 and an acid neutralizing capacity (ANC) of 40 $\mu\text{eq/l}$. Water samples from two depths (five and 40 feet) were also analyzed for silica and sodium levels. Silica values were 4.5 and 4.18 mg/l at the respective depths; sodium was 0.58 and 0.43 mg/l. Dissolved oxygen values were exceptional throughout the water column at the time of the survey.

Evaluating a nascent lake trout fishery requires more time than assessing brook trout since they are a much longer-lived fish. However, the lake trout in Henderson Lake seem to be off to a great start. We captured some larger fish, multiple year classes (Figure 1.) and all the fish looked to be in fine condition.

Figure 1. Salmonid length frequency distributions



We should continue the current stocking policies and periodically resurvey the lake to monitor the maturing lake trout population. Although we only caught five brook trout, that represents a tremendous improvement over the 2003 survey which had a single 12-inch fish. Brook trout do not normally do well in lakes with this level of competition, but they may provide a bonus fishery if the lake trout help to suppress some of the competitive pressure. It will be interesting to watch their interactions in future surveys. As is the case for all waters in the High Peaks Wilderness, the use of baitfish is prohibited. The pond is otherwise subject to Statewide Angling Regulations and that will continue.

Figure 1. Salmonid length frequency distributions

