

Long Pond General Biological Survey (#520005)
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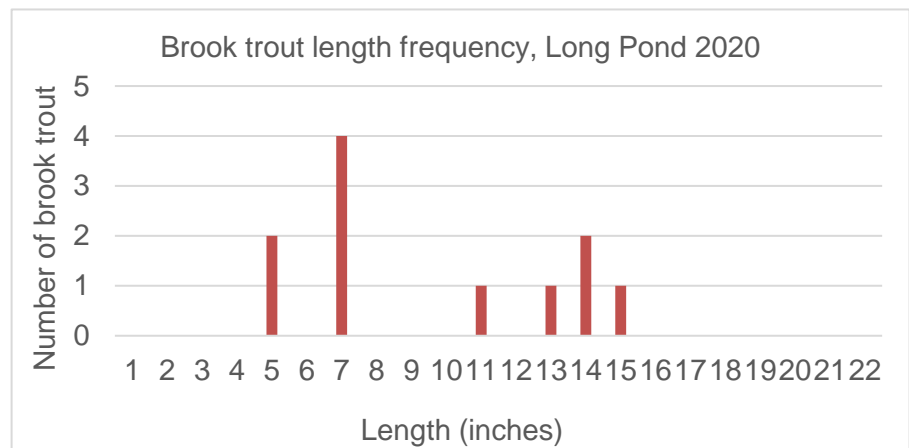
Long Pond (SC-P170A) is a 33-acre lake in Franklin County in the Debar Mountain Wild Forest. Past management include reclaiming the pond in 1965 and the addition of agricultural lime in 1985, it has been stocked with fingerling brook trout since 1942. The current annual stocking policy is 1000 Temiscamie x Domestic hybrid fingerling brook trout. The pH of Long Pond has remained reasonable for decades post liming and was 5.88 pH units in the 2020 survey with an ANC of 23 µeq/L.

Table 1. Long Pond water chemistry variables, 2020.

Year	Depth (feet)	Air Equilibrated pH (pH units)	Acid Neutralizing Capacity (µeq/L)	Conductivity (µmhos/cm)	Silica mg L ⁻¹
2020	5	5.88	23.3	6.8	0.04
	35	6.16	20.2	8.6	0.09

The lake has a maximum depth of 60 feet and there is sufficient dissolved oxygen for trout to a depth of about 25 ft. This survey was conducted to establish the status of the lake’s trout population and to verify the continued presence of nonnative golden shiner and native but widely introduced (NBWI) white sucker, brown bullhead, and pumpkinseed.

In June of 2020, three 150-foot Swedish experimental gill nets, a 30-foot minnow net, and a minnow trap were set overnight. A total of 11 brook trout averaging 10.0 inches in length were collected. Scale samples were taken from a subset of brook trout for growth analysis. Due to the combined effects of the competition from nonnative and NBWI species, brook trout growth was found to be impacted. For example, the average 2-year-old brook trout was only 7.3 inches long. However, a 4-year-old fish exceeding 15 inches in length was also collected, indicating good water quality and survival. This can be a common pattern in waters where brook trout coexist with golden shiners. Survival and growth of brook trout is quite poor except for a very few individual trout that grow large enough to prey on their former competitors. Other species collected include golden shiner, white sucker, brown bullhead and pumpkinseed, (Table 2). Likely the seven golden shiners collected vastly under-represents the true abundance of the species, as many were observed, and the minnow net was extensively damaged from turtles.



The current stocking policy of 1000 Temiscamie x Domestic hybrid brook trout per year is maintaining a popular fishery and should be continued, as anglers do frequent this water. It is still appropriate to prohibit the use or possession of baitfish, so the special fishing regulation will be retained. Long Pond is a viable reclamation candidate and should be reclaimed to eliminate nonnative golden shiner and to interrupt the gill lice life cycle which are also present in the pond.

Table 2. Number and length ranges of fish collected at Long Pond, 2020.

Species	Number collected	Minimum length (in)	Maximum length (in)
Brook trout	11	5.3	15.1
Brown bullhead	63	4.0	7.1
Pumpkinseed	122	1.7	4.8
Golden shiner	7	2.9	7.0
White sucker	1		9.3