

## Lower Preston Pond General Biological Survey #519063: Tom Shanahan, Region 5 Fisheries

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Lower Preston Pond (R238) is in the Essex County towns of Newcomb and North Elba and the Franklin County Town of Harriestown. It is located immediately downstream of Upper Preston Pond and drains into the remnants of the pond known as Duck Hole. The 55-acre pond is in the Raquette watershed and has a maximum depth of nearly 50 feet. The pond is part of the High Peaks Wilderness area and is accessed via a foot trail from the south near Henderson Lake. A partial survey was conducted in 2004, soon after the parcel became State land, and the Adirondack Lakes Survey Corporation (ALSC) netted the pond in 1986. A stocking policy for fall fingerling Temiscamie X Domestic hybrid brook trout was initiated in 2008, a few years after the pond became part of the Forest Preserve. It is presumed that the pond was stocked prior to that when it was privately owned, but we do not know the details of any fish stockings.

Along with the adjacent Upper Preston Pond (survey # 519062), Lower Preston Pond was surveyed in July 2019 to assess the brook trout population using our standard suite of sampling gear: 150' experimental gill nets (3), 30' minnow net and a metal minnow trap. Fifteen brook trout were caught along with 185 creek chub with a size range of 2.2 to 6.1 inches. The ALSC survey caught only brook trout. All of the three most recent surveys used experimental nets, but the number of sets and resultant catch varied (Table 1.).

Table 1. Comparison of numbers caught in experimental nets and sizes of brook trout in Lower Preston Pond over time.

Year	Number caught	Avg. length (inches)	Max. length (inches)	Catch per net
2019	15	13	17	5.0
2004	10	9	11	5.0
1986	65	10	15	16.25

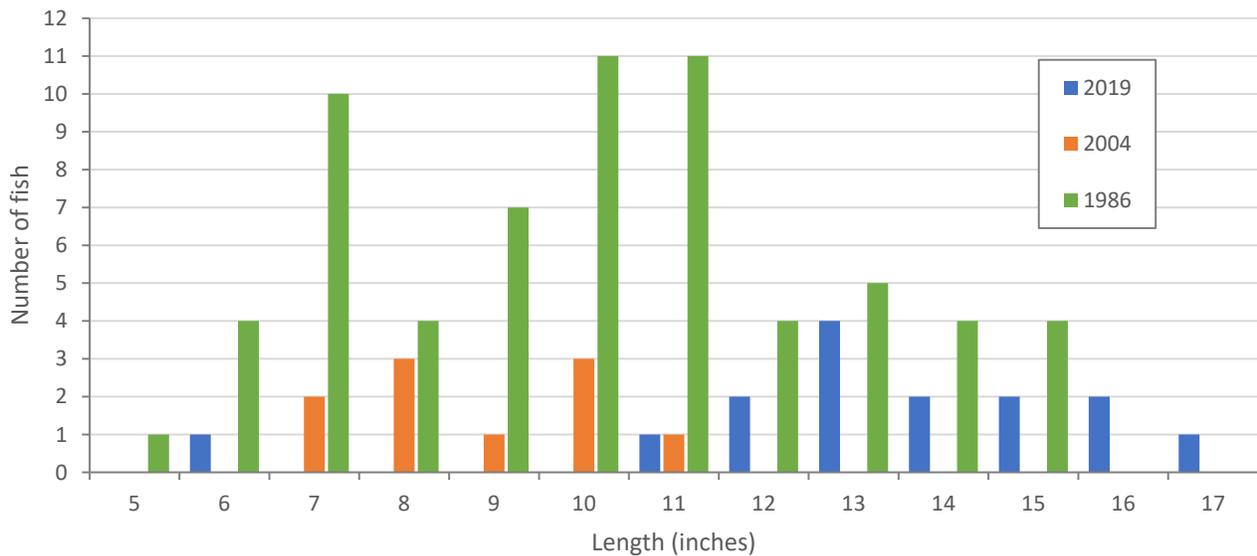
Lower Preston Pond has seen a tremendous improvement in water chemistry (Table 2.) since the ALSC survey for both pH and acid neutralizing capacity (ANC). The pH results show that present day acidity levels represent more than a tenfold decrease from 1986 measurements. Current water chemistry results combined with excellent dissolved oxygen levels and temperatures throughout the water column now provide a very suitable habitat for brook trout.

Table 2. Water chemistry values (at 5 ft depth) in Lower Preston Pond over time.

Year	pH	ANC ( $\mu\text{eq/l}$ )	Silica (mg/l)	Sodium (mg/l)
2019	6.4	21.9	3.58	0.48
2004	6.0	12.9	-	-
1986	4.9	0.1	5.2	0.43

Like its neighboring pond to the south, tracking the fishery history of Lower Preston Pond is complicated by the various ownership and stocking regimes. Looking at the brook trout catch from experimental nets (Figure 1.) for the three most recent surveys, the highest catch rates were found in 1986, but the population size structure was heavily skewed towards smaller fish. The pond was privately owned at this time and may have been overstocked, though stocking information is lacking. The 2004 survey had much lower catch rates, but this was in the transition period before DEC began stocking and after any private stocking likely ended. The current (2019) sampling exhibits a puzzling lack of smaller fish combined with three brook trout that exceeded 15 inches; this was the only survey of the three with fish of that length. This was the initial sampling since the current stocking policy began, so we may need more time and survey data to fully get a grasp of the fishery.

Figure 1. Brook trout length frequency distribution



Lower Preston Pond is producing some nice brook trout and is a worthy backcountry fishing destination. Management recommendation is to continue the current stocking policy and periodically resurvey the pond to monitor the brook trout population and species composition. Creek chub appear to be much more numerous throughout the two-pond system than they were in 1986 and might have a negative impact in the future. We also noted the presence of parasitic copepods or “gill lice” on several brook trout. 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.