

Long Pond Brook Trout Egg Take Survey #521081
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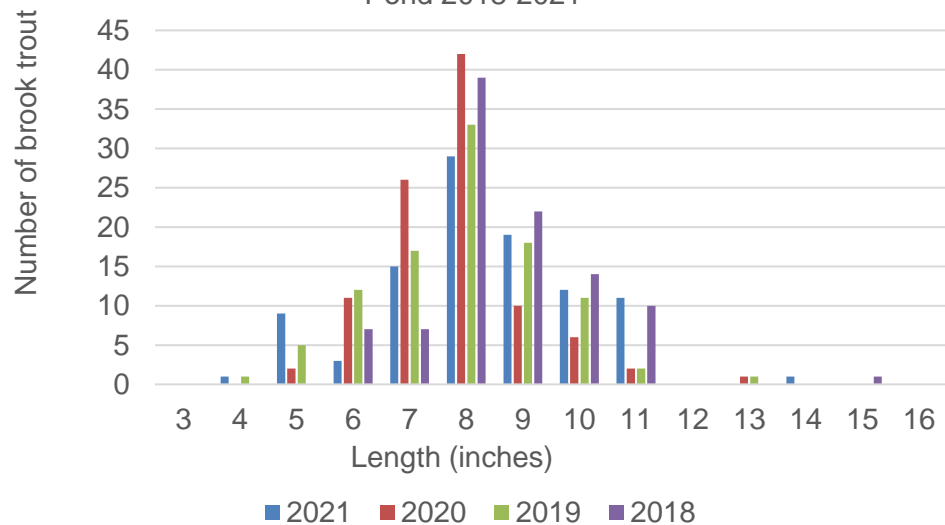
01/20/2022

Long Pond (SC-P257) is a 14-acre brook trout pond in Franklin County near Paul Smiths, NY. While the pond is on private land, a cooperative agreement between the Adirondack Park Agency, the NYSDEC, and Paul Smith’s College permits public use and DEC management of the fishery. Accessing Long Pond requires boating across Black Pond (SC-P256), followed by a 350-yard carry on a trail. Acidity has not been an issue here as a 2005 survey (#505045) found a pH of 7.46, an ANC of 196, and a conductivity of 35. A 1985 Adirondack Lakes Survey Corporation survey found a very high value for silica, considered an indicator of groundwater input, of 8.7 mg/l. The outlet flows through a fish barrier into Black Pond and as part of the Black Pond system it has been reclaimed 3 times, most recently in 1997. Following the 1997 reclamation, a heritage strain of brook trout, Windfall Pond strain, was established by six stockings over a 10-year period ending in 2007. Natural spawning is adequate to maintain the brook trout population here. Long Pond was used successfully as a source for brook trout eggs in the early nineties (Surveys #590031, #592091, and #594078) and its potential as a source for the Windfall Pond strain was explored in 2016 (#516070), as procuring the required Windfall Pond strain eggs from Black and Mountain (SC-P198) ponds has been difficult in some years. Since 2017 Long Pond has been used as the primary source of Windfall Pond strain eggs, annually meeting the egg-take goal for this strain.

In 2021, Long Pond was again used as the brood source for the Windfall Pond strain of brook trout. In early November two modified Oneida trap-nets were set in Long Pond and were fished for three nights. A total of 177 brook trout were captured, a few less than were collected in the 2020 survey, #520084. A subset of 100 brook trout were measured. In the 2021 survey all stripped females were

measured so that in future years a better estimate of the number of eggs produced per female could be obtained. The number of eggs per female is closely correlated with total length in wild brook trout. A total of 30 females were stripped, producing 531 eggs/female for a total of 15,930 green eggs. The average length of a female stripped was 9.3

Figure 1. Length frequency of measured brook trout, Long Pond 2018-2021



inches. The large number of relatively small brook trout is a consequence of very successful natural reproduction in Long Pond and most of the brook trout ranged from seven to 10 inches long. The target for this egg take was 30 pairs and this number was easily reached with 64 ripe females handled during the survey, (Table 1). The timing of the survey was good with 72% of the females ripe on 11/8/2021. Additionally, 21 creek chubs were also caught. Long Pond's naturally spawning population eliminates hatchery influence, and the use of more, but smaller, female brook trout may provide greater genetic diversity. It is now considered the primary source of eggs for the Windfall Pond strain, with Black and Mountain ponds as secondary sources.

Table 1: Number, sex and stage of brook trout collected at Long Pond, 2021.

Species	Female Ripe	Female Hard	Female Spent	Male	Immature	Total
Brook trout	64	25	0	78	10	177

The outlet of Long Pond flows into Black Pond and a fish barrier prevents upstream fish movement from Black Pond. It will be important to inspect and maintain this barrier to prevent non-native golden shiner, present in Black Pond, from gaining access to Long Pond.