

Lake Champlain Steelhead Survey #519004, 519005, 519006: Tom Shanahan, Region 5 Fisheries

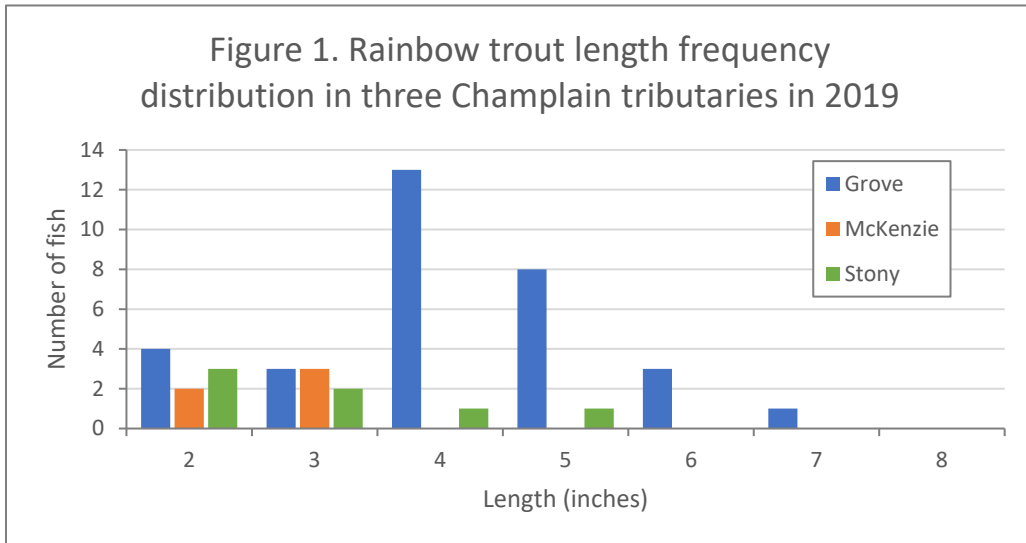
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We investigated three Lake Champlain tributaries located in the Essex County town of Moriah to check for spawning steelhead. The streams are: Stony Brook (C-89), McKenzie Brook (C-90) and Grove Brook (C-93). The streams are not currently stocked by DEC, though Essex County stocks brook trout in McKenzie Brook and puts rainbow trout into Grove Brook. Although DEC previously stocked four Lake Champlain tributaries in the northern part of the lake with steelhead, the program was discontinued in 2007 due to disease concerns. The discovery of viral hemorrhagic septicemia (VHS) in the Great Lakes region led to the decision that steelhead should no longer be transported to VHS-free Lake Champlain from Lake Ontario. These were the first surveys since the cessation of stocking to specifically target steelhead. Though we had no recent data, angler reports suggested a nice steelhead fishery had developed in southern Lake Champlain.

A single site on each brook was sampled with backpack electrofishing units in early April 2019. There was prolonged winter weather into the spring of 2019 and water temperatures were in the low to mid-30 °F range. The sampling locations for all three streams were near the mouth and below the first natural barrier to upstream fish movement. McKenzie and Grove Brooks were about 25 feet wide where we sampled, the smaller Stony Brook was approximately nine feet in width. Wild rainbow trout, along with other species (Table 1.), were captured on each stream. Although we did not observe or collect adult fish, we did manage to get more than one year class (Figure 1.) based on the length frequency distribution.

Table 1. Numbers caught and size ranges of fish from three Lake Champlain tributaries surveyed (survey number in parentheses) in 2019.

Water	Species	Number caught	Length range (inches)
McKenzie Brook (519004)	rainbow trout	5	2.2 – 3.0
	spotfin shiner	1	2.1
	northern redbelly dace	6	1.8 – 2.4
	blacknose dace	5	2.3 – 2.7
	slimy sculpin	1	2.2
Stony Brook (519005)	rainbow trout	7	1.9 – 5.4
	spotfin shiner	2	3.0 – 3.2
	northern redbelly dace	12	1.8 – 2.5
	blacknose dace	2	2.2 – 2.6
	creek chub	2	2.6 – 5.2
	white sucker	2	2.3 – 2.4
Grove Brook (519006)	tessellated darter	2	2.6 – 2.9
	rainbow trout	32	2.1 – 7.1
	blacknose dace	1	3.4



We were not able to document spawning adult steelhead, but the presence of the smaller, wild fish in each tributary substantiates the anecdotal evidence of a self-sustaining fishery. Interestingly, the Lake Champlain steelhead population did not seem to flourish in the early 2000's but may have if stocking could have continued. Steelhead stocking was not interrupted on the Vermont side of the lake, so that could also be a source of the fish from the current surveys. No management actions are proposed at this time other than to conduct period surveys in the spring to evaluate the steelhead fishery.