

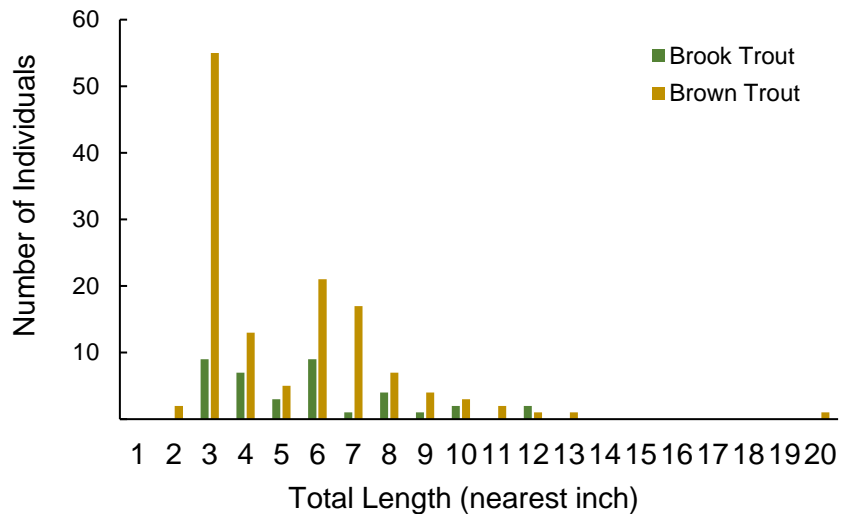
Camden Creek General Biological Survey (Survey #521068)
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Camden Creek is a medium sized tributary to the Battenkill in the town of Shushan, Washington County. The stream drains an area of 17.8 square miles, 88.9% of which is forested (U.S. Geological Survey, 2022). The best access to the stream can be found near its' mouth and the bridge on Hickory Hill Road where Public Fishing Rights easements exist on both banks. Camden Creek supports a robust wild trout population consisting of both brook and brown trout and is likely an important spawning tributary for the Battenkill system as a whole. Camden Creek is not stocked with any trout, nor is the Battenkill in its adjacent reach. The stream has been selected as part of a larger statewide effort to determine any potential impacts that the new catch & release trout fishing season (October 16 – March 31) may have on wild trout reproduction. This survey seeks to estimate the trout population in the stream with a particular emphasis on young-of-year trout production. An angler count was conducted on the stream from mid-October to mid-December of 2021 to determine catch and release angling pressure. Angler count results will be presented in separate report.

Two sites, one above (479' long) and one below (285' long) the Hickory Hill Road bridge were surveyed using multiple-pass backpack electrofishing during the middle of September 2021. Water quality metrics and stream characteristics were recorded prior to the surveys. The stream was 25.5 feet wide on average with a predominately gravel and cobble bottom. Both sites offered cover to fish in the form of deeper runs, pools, woody debris and root wads. Water temperatures averaged 59°F across the two sites.

Figure 1. Trout Length Frequency Distribution



Thirty-eight brook trout and 132 brown trout were captured across the two sites, non-trout fish species were not collected as part of this survey. Brown trout ranged in size from 2.5 – 20.1 inches, while captured brook trout ranged from 2.4 – 12.5 inches (Figure 1.,

Species	Number caught	Size range (inches)
Brown Trout	132	2.5 – 20.1
Brook Trout	38	2.4 – 12.5

Table 1. Number and total length ranges of fish captured from Camden Creek in 2021.



Table 1.). All trout captured during this survey were of wild origin. Young-of-year trout density and capture efficiency estimates, combined for both species, are show in Table 2.

Capture efficiency was lower at site 1, likely due to habitat complexity; greater undercut root wads and woody debris, which made for difficult netting of fish that were inhabiting these areas.

Site	Estimated YOY/Acre	Estimated Capture Efficiency
1	361(338-394)	0.58 (0.45--0.67)
2	205 (205-214)	0.88 (0.75-0.93)

Camden Creek continues to support wild populations of both brook and brown trout. The presence of a wide range of sizes of trout indicate that the stream can support adult fish as well as provide suitable spawning habitat and nursery habitat for young fish.

Table 2. Estimated young-of-year trout (brown and brook) capture efficiencies and density per acre (with 95% confidence intervals) at two sites on Camden Creek.

The newly adopted New York State Trout Stream Management Plan (NYSDEC, 2020) establishes five independent management categories and criteria (angler access, stream size, trout carrying capacity, angler use) for inclusion of specific stream reaches into those categories. Camden creek is currently managed under a “Wild” category designation. Detection of wild trout population densities of greater than 40lbs per acre or greater than or equal to 300 yearling trout per mile would initiate management under the “Wild-Quality” category.

The 2021 survey found combined brook and brown trout densities of 778 yearling trout per mile (55.4 lbs/acre) and 474 yearling trout per mile (44.7 lbs/acre) at sites 1 and 2, respectively. Furthermore, the Clearwater Chapter of Trout Unlimited is actively working on Camden Creek to restore instream and riparian habitat which may result in even higher wild trout densities. We recommend that Camden Creek be upgraded to a “Wild-Quality” designation with a trout harvest regulation of 3 trout per day with no more than 1 over 12 inches. Identification of areas for future habitat improvement projects or acquisition of public fishing rights easements should be a priority on this stream. Trout population and angler count surveys will be conducted in the same fashion on Camden Creek annually through 2024 as part of the statewide catch & release season impact study. Beyond 2024, trout populations surveys will be conducted on a 10-year recurrence interval, as outlined in the trout stream management plan.

Literature Cited

U.S. Geological Survey, 2022. The StreamStats program online at <<https://streamstats.usgs.gov/ss/>>. 04 Jan 2022.

NYSDEC, 2020. New York State Trout Stream Management Plan, November 2020. New York State Department of Environmental Conservation Bureau of Fisheries.