

Fish Survey of Cathance River, Topsham, Maine

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Purpose:

- What are the types and lengths of fish that can be found in three different areas of the Cathance River (an in-river pool, riffles, and a pond)?

Hypothesis:

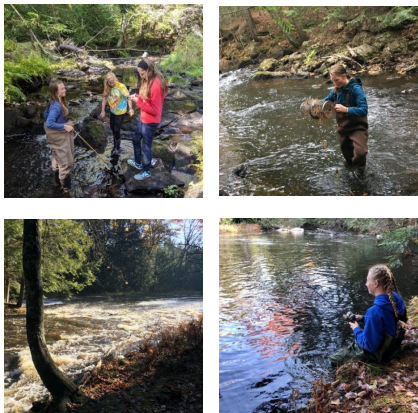
- Smaller fish will be found in the in-river pool.
 - Bigger fish will be found in the pond.
 - A combination of both will be found in the riffles.

Background:

- An in-river pool is a place in a river where the water is slower and deeper than average.
 - Riffles are a rocky or shallow part of a stream or river with rough water.
 - A pond is defined as a small body of still water formed through natural causes.
 - In the previous study of this river in 2016, sunfish and fallfish were found.

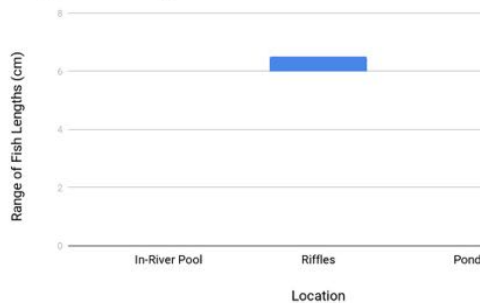
Procedure:

- 1) Set minnow traps with bait in the in-river pool and in the riffles and leave them there for one week.
- 2) Test abiotic factors (pH levels, dissolved oxygen, air and water temperature, water speed, and water depth).
- 3) In the pond, fish with worms/lures; measure, weigh, photograph, and identify any fish caught.
- 4) Check minnow traps and document all fish caught; identify, photograph, weigh, and measure them.
- 5) Record data and the amount of time spent fishing in each habitat.



Top Left: Mary, Grace and Megan collecting data. Bottom Left: River after heavy rain. Top Right: Mary checking trap. Bottom Right Megan fishing.

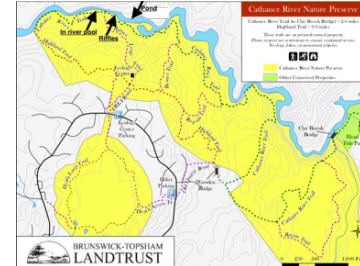
Ranges of Fish Lengths in River Locations



River Abiotic Factors

| Habitat | Avg. pH | Avg. Dissolved Oxygen (ppm) | Avg. Water Temp. (°C) | Avg. Air Temp. (°C) | Avg. Water Speed (m/sec) | Avg. Water Depth (cm) |
|---------------|---------|-----------------------------|-----------------------|---------------------|--------------------------|-----------------------|
| In-River Pool | 5.8 | 6.8 | 12.6 | 13.2 | 0.634 | 50 |
| Riffles | 6 | 7.3 | 12.7 | 13 | 0.641 | 36.3 |
| Pond | 6 | 8.2 | 12.7 | 13 | <0.01 | 64.7 |

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*Topsham Cathance River
 Preserve with river test sites*



Pearl Dace caught in the riffles

Conclusion:

- The researchers were not able to successfully prove the hypothesis.
 - Only two fish were caught over the course of six weeks.
 - The researchers additionally caught a slightly larger fish that was dead and after dissection, still not clearly identifiable.
 - The two fish caught measured 6 cm and 6.5 cm in length.
 - The fish were both caught in the riffles section of the river, and they were both Pearl Dace, which shows that there are smaller fish in the riffles.