Brown Trout in North Branford

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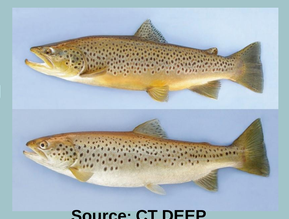
INTRODUCTION

I am proud to have been a part of raising trout in two fish tanks in the North Branford High School greenhouse. Trout is a crucial species to our environment, and in raising and releasing them, we are able to help our ecosystem thrive. This experience is a part of the larger Trout in the Classroom project, organized by the Connecticut Department of Energy and Environmental Protection (CT DEEP).



Source: CT DEEP

Trout is a crucial species to widespread freshwater ecosystems, including rivers and streams. Brown trout (*Salmo trutta*) are better accustomed to warmer temperatures than other trout and their high growth rates keep them from succumbing to fishing pressure. Brown trout in Connecticut are an important renewable source that delivers quality and diversity to fisheries and habitats. The goals of this study are to learn more about this amazing species, how to care for them, and what they do for the environment.

A

B

C

D

Fig. A and D depict water testing materials and chemicals. **Fig. B** shows trout eggs in the tank soon after we received them, in the "eyed ova" stage. **Fig. C** depicts the same fish eggs, slightly more matured as short tails can now be seen; this is the young "alevin" stage.

MATERIALS AND METHODS

Raising Brown Trout

- Maintained temperature
- Tested water daily for pH and ammonia levels
  - At North Branford High School
  - Winter and spring, January-May
  - Hatch time is 23 days
  - Ideal pH level is 7
  - Ideal ammonia level is 0
  - Ideal temperature is 55 degrees F (light-blocking technique aids in maintaining tank temperature)

E

F

Fig. E shows another pH chemical test; **Fig. F** displays the temperature gauge for the tanks.

Trout in Ecosystems

Some trout can migrate to the sea but they are most often found in rivers and streams in colder temperatures. Females prefer to build nests in January and lay their eggs soon afterwards. Eggs hatch within roughly 23 days. Trout often eat flies and spiders that fall to the water's surface, as well as occasional shrimp and even small fish.

G

Fig. G shows one of two of our fish tanks for the trout, placed outdoors but in a heated greenhouse.

RESULTS / DISCUSSION

Raising Trout

- Trout can easily be raised with few materials and a rather simple setup.
- Raising trout is a wonderful learning opportunity for students, as well as a positive impact on the environment.

Out and About

- Trout create crucial diversity in ecosystems and fisheries and play an important role in aquatic food webs, consuming and controlling fly and shrimp populations.
- Upon further maturation in May/June, our young trout will be released into Farm River and the new fish ladder built on Mill Road, North Branford.

H

Fig. H This image shows a clear view of more trout eggs in the eyed ova phase, with a plastic plant for decoration and scale.

CONCLUSION

- Brown trout are common in many Connecticut streams and are important to the fish industry. They are wild and also stocked in CT lakes and streams. We need to be watchful over, and consistently replenish, this fish species.
- Participating in this opportunity as taught me multitudes about aquatic fisheries and populations, as well as the possibility of directly hatching eggs with a few simple steps.
- Runoff pollution and trash are problems that put water bodies at risk. They have intricate systems that we must protect and preserve, or else we risk losing important species, some of which may never be replenished

REFERENCES

Brown Trout. (n.d.). Retrieved from https://portal.ct.gov/DEEP/Fishing/Freshwater/Freshwater-Fishes-of-Connecticut/Brown-Trout

Connecticut Fish Hatcheries. (n.d.). Retrieved from https://portal.ct.gov/DEEP/Fishing/Fisheries-Management/Connecticut-Fish-Hatcheries

Trout Unlimited (n.d.) Trout in the Classroom. Retrieved from http://www.troutintheclassroom.org/

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