# Ogunquit River Seeding Project

Results of a municipal softshell clam seeding effort in the Ogunquit River

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# Background

- Seeding mudflats with clam spat has been used by municipalities to enhance shellfish stock for years.
- The Ogunquit River presents a unique flat, comprised mostly of sand and a channel running through it with a strong draining current.
- This area has been seeded in the past and this project aimed to evaluate the success of a seeding activity over the winter.

# Effort and Cost

- 10 people, including 2 wardens, working for 2.5 hours to spread ~200k seed and install 7 predator nets.
- 2 people working for 6 hours to remove nets.
- The approximate cost of the project was $5000.
- Hatchery delay resulted in seeding in the fall, which is less conducive to overwinter survival.

# Seed and Survey Sites


Ogunquit River 2023
Seeding Site


Ogunquit River 2023
Survey Site

# Plot Size

- The shellfish committee chose to seed 7 8ft x 8ft plots on the Southeast side.

- Each plot had predator netting with toggle floats over it, with an opening of 0.16in (4.2mm) in the netting.

# Flat Prep and Distribution

Prepping Flat with Hand Implement

Spreading Seed ~334-445 clams/sq ft

# HOBO Temperature Loggers

HOBO Temperature Loggers

HOBO Temperature Logger in Plot Corner

# Results

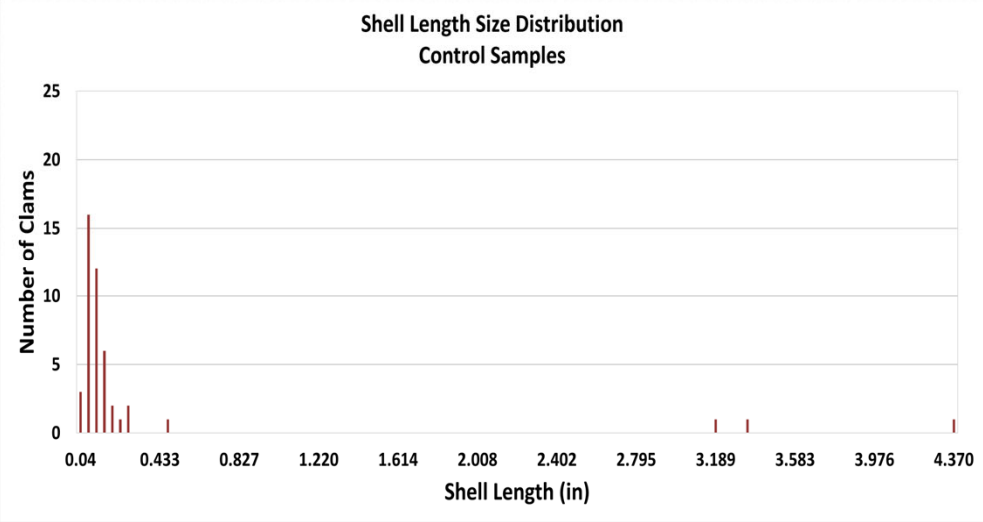
- The fall 2023 survey of the Southeast side (prior to seeding) showed mostly large clams greater than 2in (50.8mm).
- The spring 2024 survey of the same side (seeded) showed mostly spat-sized clams less than 0.39in (10mm).
- Significant winter storm activity resulted in the loss of all 4 HOBO temperature loggers = no time series temperature data.

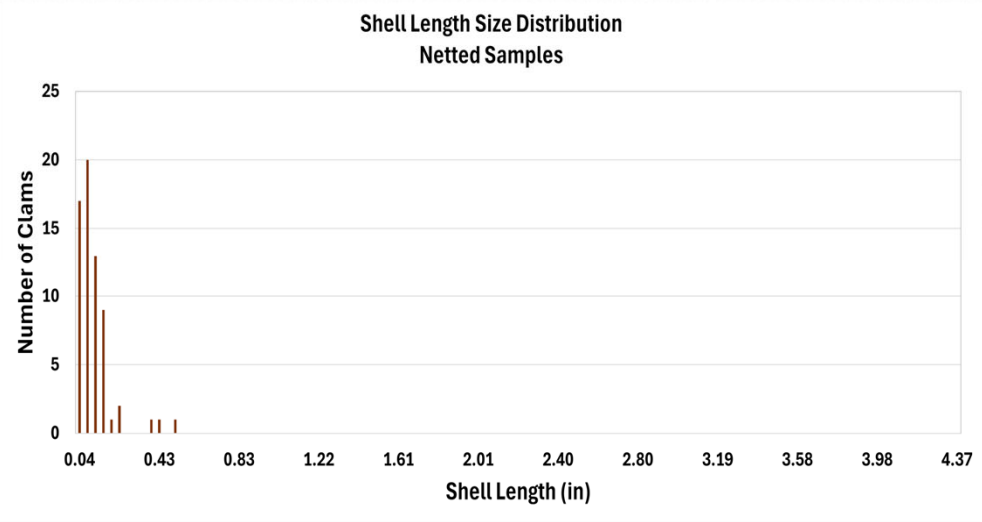
# Results

- The spring 2024 survey showed that the netted plots had ~1.55% survival, with an average of just over 6 clams/sq ft.

- Studies have shown that seeding with predator netting can increase abundance, however, this seeding did not show a significant increase in softshell clams in the treated areas.

# Results




Control Plot Results

Netted Plot Results

# Conclusions

- A comparison of the abundance distribution was performed, which found there was no statistically significant difference between the seeded and netted plots versus the untreated plots (p-val=0.559).

- This area would need another round of seeding and surveys, with finer tuned data, to determine whether seeding is an effective conservation measure for the effort put in.

# Considerations

Softshell Clam Spat

- To encourage success of seeding projects, utilize nets and spread seed during the growing period to allow spat to mature and settle prior to winter.
- Remove netting prior to ice over.
- Perform surveys to provide baseline abundance data for comparison over time.

# Considerations

- Since Ogunquit is recreational only, the efforts of a seeding *may* enhance harvest for diggers compared with commercial.
- Seeding in the fall likely contributed to low survival over the winter; consider seeding during the growing season.

Ogunquit River

# Acknowledgements


- I would like to extend a sincere thank you to the members of the Ogunquit Shellfish Committee and associated volunteers, as well as the DMR staff who assisted in this work, including Katie Miller, Katie Tilton, and Jay Turnure.
- I would also like to thank Ben Capuano from DEI for his assistance during the spring 2023 survey while he was working as a contractor for the DMR Nearshore Marine Resources Program.