Damariscotta **Community Science** Shellfish 2022 Update



October, 2022 Board of Selectmen

Agenda

- Project background recap
- Review 2022 activities
- Report 2022 results
- Discussion
- Questions



Characterize & Quantify Commercial Shellfish Populations







Softshell Clams (*Mya arenaria*) Quahogs (Mercenaria mercenaria) American oysters (Crassostrea virginica)•

Monitor Changes in Shellfish Predators



mage source: <u>Downeast Institute</u>

Milky ribbon worms (Cerebratulus lacteus)



Green crab (Carcinus maenas)



Document Harvester Knowledge

- 3. On average, how often do you harvest each week?
 - a. 1-2 days per week
 - b. 3-4 days per week
 - c. 5-7 days per week
- 4. What shellfish species do you harvest? (rank 1-5 from most harvested to least)

Species	Rank
Softshell clams	
Quahogs/Hard clams	
Razor clams	
American oysters/Eastern oysters	
European oysters/Belons	
Other:	

5. What predators affect shellfish species? (rank 1-3 from greatest effect to least)

Species	Rank
Green crabs	
Milk ribbon worms/tape worms	
Boring snails/Moon snails/Oyster drills	
Other:	

Surveying harvesters about species and harvesting changes.

Visiting local fish houses to Jef Roc speak with harvesters.



Engaging Students: Summer 2022 Activities



Audrey Hufnagel High School Intern

High School Field Days June, July, August



Jakob O'Neal Undergraduate intern





Westview Has Fewer Soft-shell Clams



There Are Oysters Across All Sites



Quahogs Are Most Abundant at Westview



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Fewer Green Crabs at Days Cove





Fall 2022 Activities

High School Field Days Sampling green crabs at all 3 sites



Discussion

- Quantifying shellfish populations
 - Inform number of licenses issued
 - Conservation closure areas
- Monitoring shellfish predators
 - Conservation activity timing
 - Identify fishery threats
- Harvester knowledge
 - Guide future research
 - Highlight challenges and concerns





Questions?

Many thanks to:

- Damariscotta-Newcastle Joint Shellfish Committee
- Lincoln Academy
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- Broad Reach Maine Shellfish Restoration and Resilience Fund
- UMaine Mitchell Center & US National Science Foundation Program







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