Maine's Newest fishery

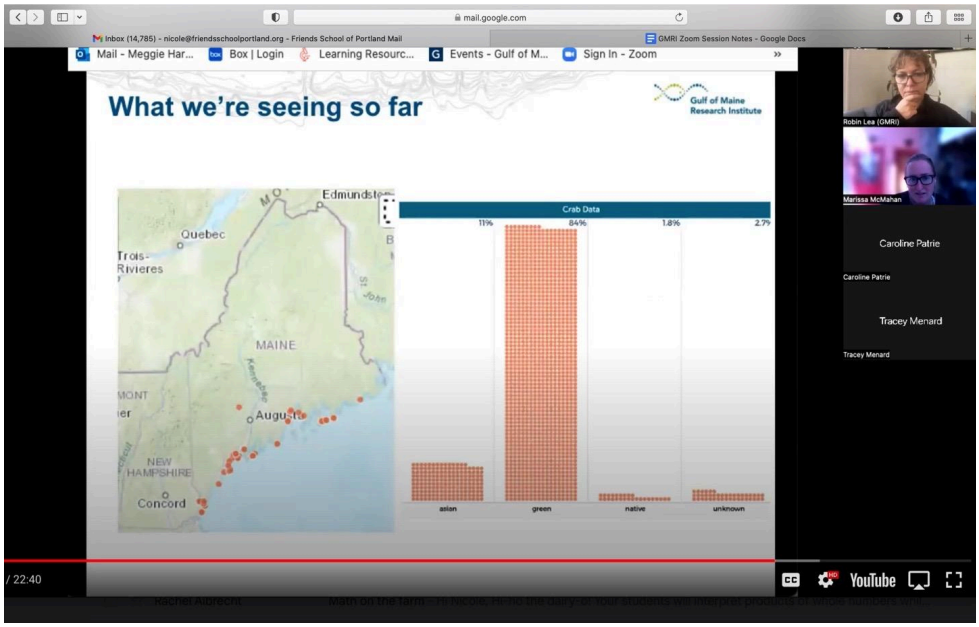
By Theo Maley

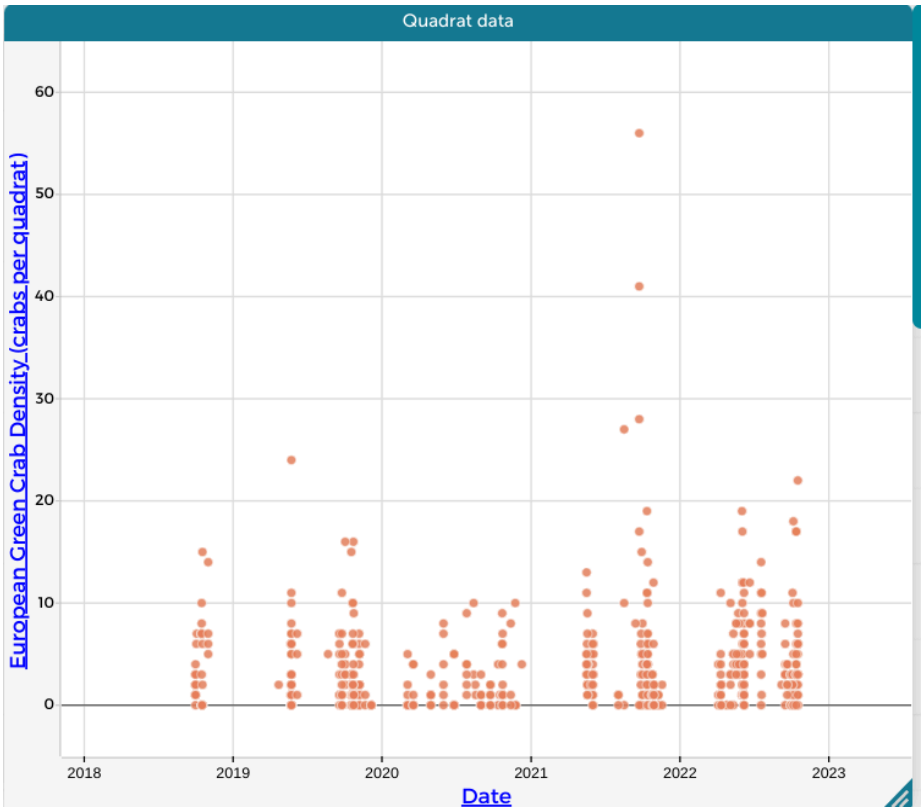
Research Question: Where do we predict Native, Green, and Asian shore crabs will be in the future?

Green crabs will become Maine's newest fishery.

The intertidal zone is one of the most diverse and tough ecosystems on the planet. The intertidal zone has four different zones: The spray zone, the high tide zone, the mid-tide zone, and the low tide zone. On the coast of Maine, the intertidal zone also acts as a very important part of Maine's economy and is culturally important to the Wabanaki and has been for hundreds of years. But the Gulf of Maine is the fastest-warming body of water in the world. Next to that, the invasive species, like the European Green Crab is wiping out native shellfish populations in Maine. The green crabs have 5 spikes on both sides of their carapace, and are often green but can also be orange or brown.

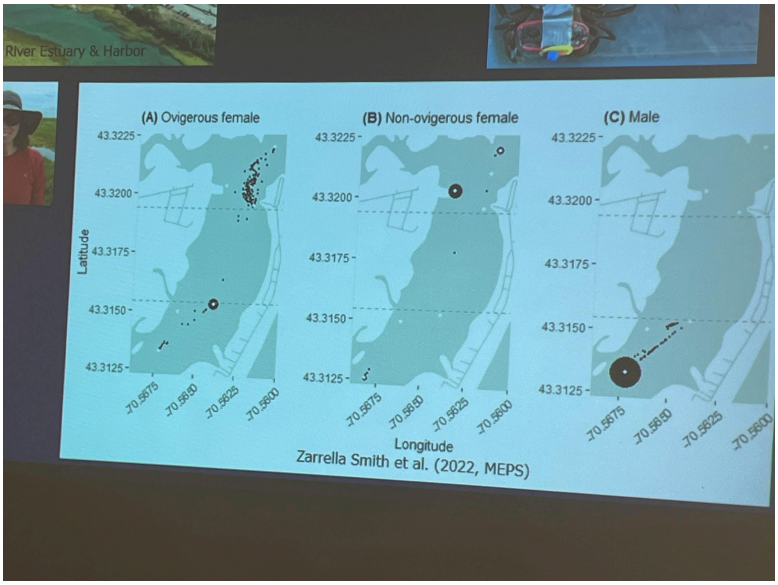
As you can see in the graph below, the green crabs are taking over the intertidal zone, making up 84% of the crabs that were found by GMRI's survey. Native crabs make up only 1.8% of all, and Asian shore crabs are 11%.





As seen in this graph that I made on CODAP, the Green Crab populations are high and rising.
Some of the spots with the highest density spots were in york and cumberland countys.

The Green Crabs can be eaten in a few ways: Shucked for roe', In a stock, Soft-shell, Shucked for meat, and Fermented. All of these ways come from Greencrab.org linked below. _https://www.greencrab.org/eat



On our trip to wells reserve, we learned that Green Crabs gather in different places. This information could be a big help to fishermen in the future, because they can see where to fish for the green crabs.

What looks like a problem, could be an answer. If the Green Crab population keeps rising, then it could be a good thing because it could make it possible to make a successful fishing industry. As I stated, green crabs can be eaten in several ways. The Wells Reserve map shows where green crabs can be found at different stages so if fishermen wanted to find a good source of crabs, they could use data to see where to fish. There is already some fisherman in the gulf of maine who are fishing for green crabs and using them as bait.

I think have enough evidence to support my claim. I collected my evidence from GMRI and that was a very big sample size, though most of the data samples were collected by middle schoolers and high schoolers. Of course, lots of things could happen, or some version of my claim could come true. My evidence could also support the claim that green crab populations are rising in the gulf of Maine. If I continued this investigation my next step would be to try to cook green crabs and see if they are good. A question that I have developed is, why haven't people in New England (where the green crab populations are very high) all ready eaten a bunch of green crabs, why aren't green crabs all ready one of Maines's fisheries?

Works Cited

"Ecosystem Investigation Network." *GMRI*, investigate.gmri.org/project/interidal_crabs/.

"Greencrab.org." *GREENCRAB.ORG*, www.greencrab.org/eat.

Engage in argument from evidence: Highlight the highest level achieved

I can...

Level 1	Level 2	Level 3	Level 4
Use the information I gathered to make a claim about the research question	Support the claim with evidence from the data (at least 3 pieces of data) AND explain how the data supports the claim AND explain why anyone should care about the claim.	Explain how confident I am in the claim, considering factors that might have impacted the data, variability in the data, or the amount of data.	Explain how other possible claims were ruled out OR pose additional questions to investigate further.