

2019

Is the salinity in the march affecting the alewives from reproduction?

Brooke H

St. George School, Tenants Harbor, ME

Follow this and additional works at: <https://findings.gmri.org/journal>

Recommended Citation

H, Brooke (2019) "Is the salinity in the march affecting the alewives from reproduction?," *Findings from the Field*: Vol. 2 , Article 10.

Available at: <https://findings.gmri.org/journal/vol2/iss1/10>

This Nature Notes is brought to you for free and open access by Findings from the Field. It has been accepted for inclusion in Findings from the Field by an authorized editor of Findings from the Field.

St. George School

Mrs. Schmanska, Mrs. England

“Is the salinity in the marsh affecting the alewives from reproduction?”

Brooke H.

Nature Note

“Is the salinity in the marsh affecting the alewives from reproduction?”

Our marsh is located in Tenants Harbor, Maine near the St. George School. The marsh flows into Ripley Creek which then flows into the ocean in our Harbor.

On Thursday, April 25th our class collected a water sample at 1:03 pm. One sample had a salinity of 0.27 ppt. It was collected in the marsh near the outlet dam. This salinity didn't surprise me because I know that there had been seaweed in that area, which means the salt came in on a tide sometime earlier. Also, the past four days before, there had been bigger tides than that day which would have brought more salt in. The tide that day was 9.7 ft.

Since most of us were not expecting to find salt in the marsh, we think it must have come in on the spring tides. Spring tides are the highest of the high tides that happen when there is a full moon every month.

In the mid 1980's, the alewives stopped coming back to the marsh. Alewives are usually restocked for four years in a row, but starting in 2009 they restocked 500 fish for five years until 2013. In the spring of 2016, they found 30-40 fish in the culvert and netted 10 of them. There were no sightings of alewives in 2017. Though in 2018 there were two fish netted. Our observation of the salt water in the marsh is important because we think this could be a reason why the alewives are not coming back since they restocked.

This importance of this salinity sample is we think the salt in the marsh is what might be causing the alewives to not come back to the marsh, because alewives normally spawn in freshwater. For many years, many alewives returned to the marsh where they spawned. Then they stopped. The ocean water is where the salt has been coming from, because of climate change. The ocean water is coming in from storms, spring tides, and overflowing into the marsh. Four days before our sample was collected, the tide was 11.4 ft.

The question we are trying to answer is, “Is the salinity in the marsh water what is affecting the alewives from reproducing and growing our population of alewives?” Our way to answer our question will be to set up tanks in our classroom, as many as we decide on. Once we do that, we will fill each tank with a different amount of salinity, as well as having a freshwater tank, and we will put the same amount of fish in each tank. When all of the tanks are set up we will see how long each of the fish survive in each tank, depending on the salinity.



Tenants Harbor marsh



The dam at the marsh