

# Nature Note: Findings from the Field: Middle School Journal

## *Dasysiphonia* in New England

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In Asia, there is a macroalgae known as *Dasysiphonia japonica*, present in the warm waters off the coast. In 2009, researchers in Rhode Island discovered a red tendril seaweed washing up on the shores. This was the *Dasysiphonia japonica* that was native to Asia. The algae is thriving in the warming Gulf of Maine. Research shows that the seaweed might have been present as early as 2007 (Dooly, 2018). The invasive species probably arrived from an Asian shipping vessel. Now the red algae is appearing in Scarborough on the famous Old Orchard Beach, and the algae is thriving in the warming Gulf of Maine.

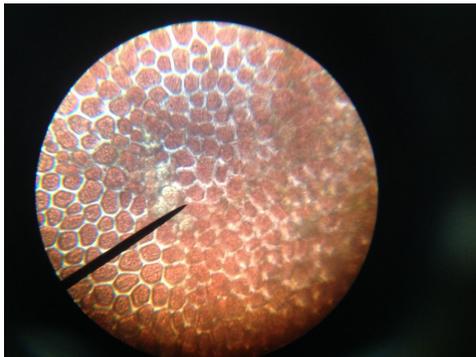
At Pine Point, where the algae first appeared in Maine, a conservation area is housed. This area prohibits the removal of grasses, seaweed, and other plant life. This means the beach can't dredge the algae to prevent the spread. According to residents of the area, they say that the awful red algae smell seeps into the neighborhood. (CBS 13, 2018)

## Is *Dasysiphonia japonica* spreading further?

*Dasysiphonia japonica* is not present in Isle A Haut, Head Harbor because our group found no *Dasysiphonia japonica* present in our sample, taken from 44.0175 lat, and -68.6198 long, collected by the Department of Marine Resources that collects samples from spots across New England. Our specific sample was taken on 11/17/2019. We searched thoroughly for *Dasysiphonia japonica* over the course of two days, with flashlights, and still nothing. This is extremely odd, since Hurricane Island, nearby, yielded a lot of *Dasysiphonia japonica*.

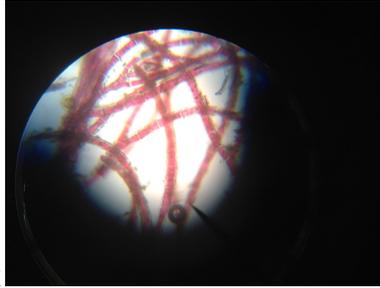
## Research Observations

Of photos I took through the microscope, only had one kind of red algae, and that was the only kind present in our sample, which looked nothing like *Dasysiphonia japonica*, it was more like red lettuce to the naked eye. Other seaweed species appeared in the sample, including brown macroalgae, green kelp, and older, dead brown kelp.



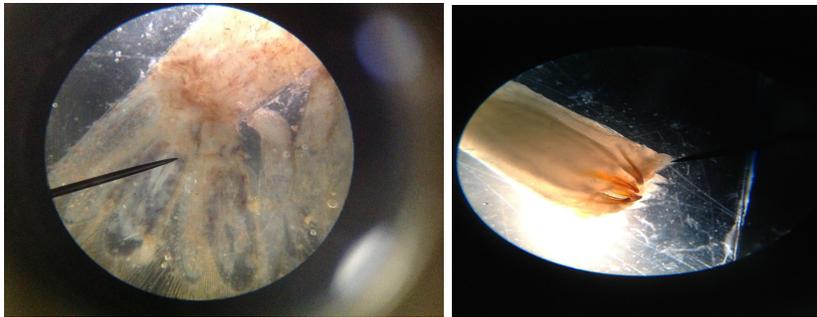
Taken at 100x magnification

For comparison, this is a sample of *Dasysiphonia japonica* found in Phippsburg, ME.



Taken at 100x

The island was extremely habitable for animals as much as kelp, and I ended up taking many pictures of small shrimp and other crustaceans.



Both are taken at 40x,

I believe the lobster tail looking thing is a lobster, while the sharp teeth appear to be some sort of sandworm. The area that the sample was pulled from had numerous native animals, other classmates had also taken many pictures of the lobster larvae, sandworms, and other small fish and crustaceans. Overall, Isle A Haut seems to be teeming with everything, but *Dasysiphonia japonica*.

## Implications

The discovery of *Dasysiphonia japonica* could further advance knowledge of what the world has to watch out for as the temperatures rise. The gulf is threatened by this algae because it can destroy habitat for many creatures, by forcing out the kelp forests in the Maine ocean. This could also damage the economy by threatening the beautiful beach fronts present on the Maine coast. We have to prepare for what climate change throws at us,

and *Dasysiphonia japonica* is a precursor for what's to happen in oceans across the world. There is much more work to be done, the gathering and study of the seaweed could help us prevent further spread of *Dasysiphonia japonica*. The research of the area and research of the habitat could also help show where *Dasysiphonia japonica* will appear and thrive because the habitat may be unique in some way.

## References cited

The happenings in scarborough:

“Algae, 'Almost Unbearable Stench' Driving People Away from Maine Beach .” *Bangor Daily News News Category*, CBS13, 31 Dec. 1969, [bangordailynews.com/news](http://bangordailynews.com/news).

Forecaster, JULIETTE LAAKAThe. “Yearly Invasion of Stinky Algae on Scarborough Beach Is Lasting Longer This Year.” *Press Herald*, 10 Aug. 2018, [stage.pressherald.com/2018/08/09/yearly-invasion-of-stinky-algae-on-scarborough-beach-is-lasting-longer-this-year/](http://stage.pressherald.com/2018/08/09/yearly-invasion-of-stinky-algae-on-scarborough-beach-is-lasting-longer-this-year/).