

Nature Note: Findings from the Field: Middle School Journal

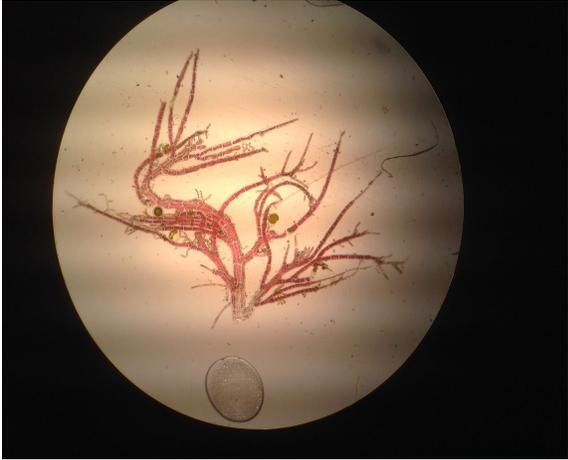
Seaweed Samples from Hurricane Island

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2/27/2020

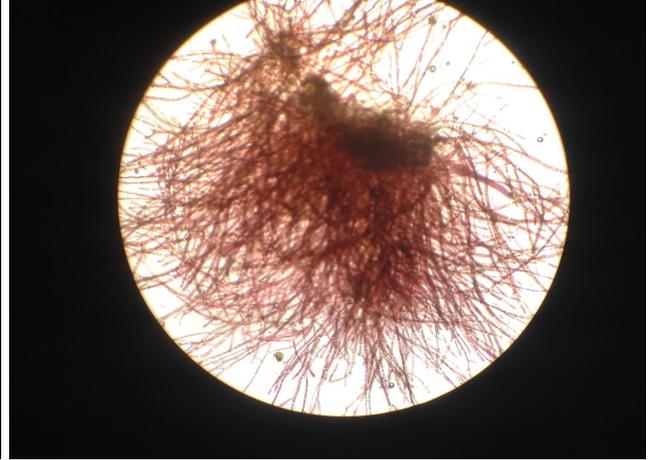
In order to understand the topic, it is important to know that *Dasysiphonia japonica* is an invasive species from east Asia. *Dasysiphonia japonica* thrives in warmer ocean climates, so with Maines warming water it has been outgrowing other native species like kelp. Since climate change kelp's growing season has been getting smaller and smaller until almost 60% of kelp has been invaded by *Dasysiphonia japonica*. To put it in perspective if we destroy a kelp forest it's like destroying a forest, think of how many animals would die and how many would be left without refuge. That's what's going on in the water every time another kelp forest dies. This topic is important to the fishing economy because without large kelp forests there's no habitat for fish so they can't hide from a predator. This is a problem because without protection more fish will be eaten which will devastate the coastal economy. Scientists already know that *Dasysiphonia japonica* is made of a bunch of fibers and it grows in subtidal rocky substrate(Masahiro Kajimura, 1992). My investigation will add more information to the cause because with more information maybe we can find a way to control the *Dasysiphonia japonica* and bring back our kelp forests.

I have evidence that there is *Dasysiphonia japonica* in Hurricane Island (44.0308, -68.8852) because out of all the 12 kids in my research group 10 found at least one piece of *Dasysiphonia japonica* in our Hurricane Island sample. We got this sample on a boat at low tide off the coast of Hurricane Island. This sample was in a place where the algae never touched air. It was always submerged completely so we would have the best results.

For every *Dasysiphonia japonica* I found there were three red macroalgae look-a-likes which shows that we're still maintaining adequate biodiversity.



Shown in 40x magnification



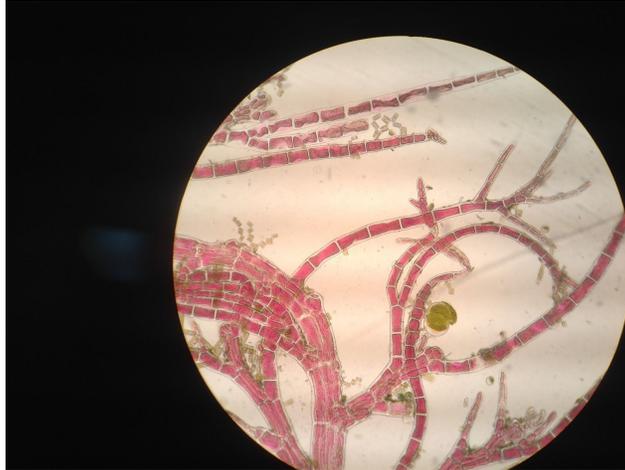
Shown in 100x magnification

These are two photos of the look-a-likes I found in the Hurricane Island sample.



Shown in 100x magnification

This is the *Dasysiphonia* because if you look at the end it has a tangle of mass that almost looks like a gray circle in the middle. This was the most common way to tell whether it was *Dasysiphonia* or not.



Shown in 100x magnification

These are all the phytoplankton I found on the macro algae.

This was expected because on 11/14/2017 we found *Dasysiphonia* in Hurricane Island just like this year. In my group we were able to make an educated guess that we would find *Dasysiphonia* because since *Dasysiphonia* is an invasive species once its introduced to the environment it won't leave unless the habitat is too cold for it.

These photos were taken on 1/28/20-1/29/20.

References cited

Rivera, Ben, director. *Dasysiphonia japonica*. YouTube, YouTube, 12 June 2018, www.youtube.com/watch?v=E1f1v8J_wal.

staff, Science X. "Researchers Find Invasive Seaweed Makes Fish Change Their Behavior." Phys.org, Phys.org, 22 May 2018, phys.org/news/2018-05-invasive-seaweed-fish-behavior.html.