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A Microscopic View of the Sea Water Around Us

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A Microscopic View of the Sea Water Around Us

Deer-Isle Stonington Elementary School 7th and 8th graders

Our study of plankton began with reading sections of *Sea Soup: Phytoplankton* (Cerullo 2003). On 30 April 2019 and 2 May 2019, we saw plankton for the first time. Our specimens were collected as described in Figure 1. We used a plastic pipette to put 5 drops of sea water onto a glass slide and we did not use cover slips. Then, we scanned the puddles on our slides back and forth with NASCO High School microscopes. Most of our observations were made using the low objective so the magnification was 40X.

We were totally amazed and surprised to see so many different, living things in five drops of water. The zooplankton were the little animals and they moved. Some of them were very, very fast and they darted across the view. Some of them were slow and some of them wiggled. The phytoplankton were the little plants and protists. They did not move and many of them were green. Many of the organisms were transparent and you could see everything from the legs to the insides. We drew pictures of what we saw (Figure 2) and we figured out how to use our phones to take pictures (Figure 3). What caught our attention was the strands that were not moving that were bright colors like red and blue (Figure 4). We wondered what those were.

Abby Barrows is a marine researcher and oyster farmer who lives here on Deer Isle. She visited our classroom on 1 May 2019 to talk about microplastics and how plastic is polluting the world (Barrows 2018). Most of the plastic is from stuff that gets used one time (PlasticsEurope, 2016). That's what the blue and red strands on our slides were and we were on the lookout for them when we examined plankton the next day. We found many more examples when we knew what to look for. Also, Abby put filter paper in a Petri dish on the teacher's desk and she used our SmartScope to examine it at the end of the 50 minute class. A piece of microplastic fell out of the air!

Many of us fish and some of us have been fishing since we were eight years old. We wondered what the microplastics were doing to the lobsters and clams, especially because now we understand lobsters and clams start out as zooplankton. What does microplastic do to them when they are small and then when they are big? If there is microplastic in the air and we are breathing it, where does it go? Is there microplastic in our snot? What we can't normally see in the water and in the air impresses and worries us.

Figure 1. Collection Information

Place	Date	Time	Method
Falls Bridge, Blue Hill	30 April 2019	0630	Plankton net
Mill Pond, Deer Isle	30 April 2019	0700	Plankton net
Falls Bridge, Blue Hill	2 May 2019	0600	Plankton net
Town Dock, Stonington	2 May 2019	0730	5L bucket with filter

Figure 2 Our Drawings of Plankton

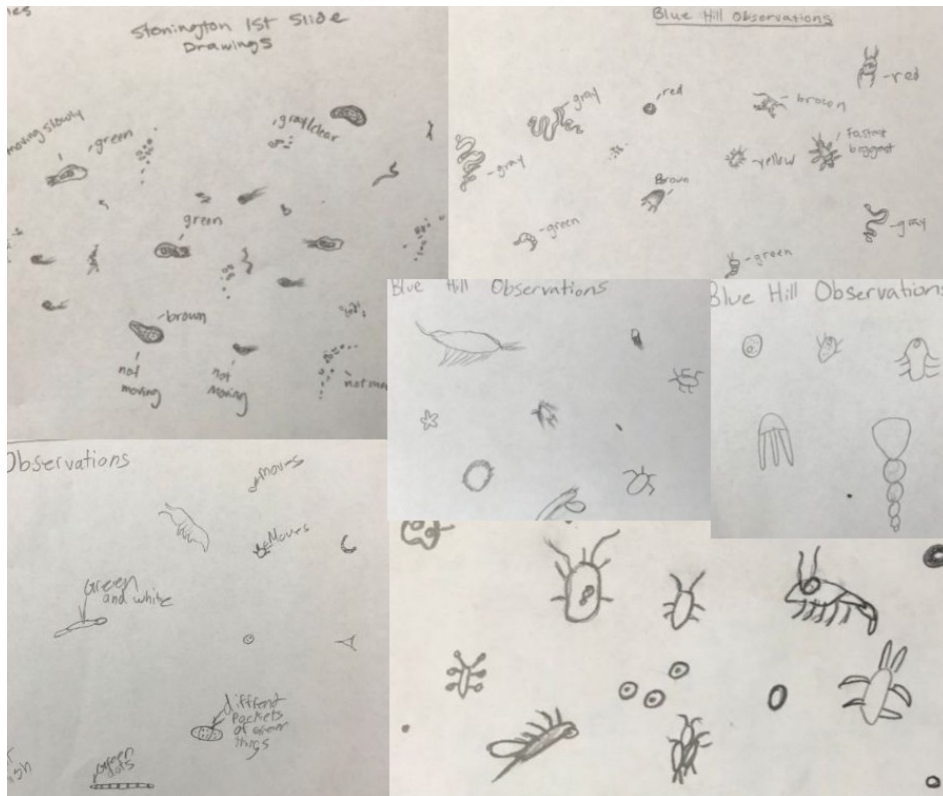


Figure 3 Our Photos of Plankton

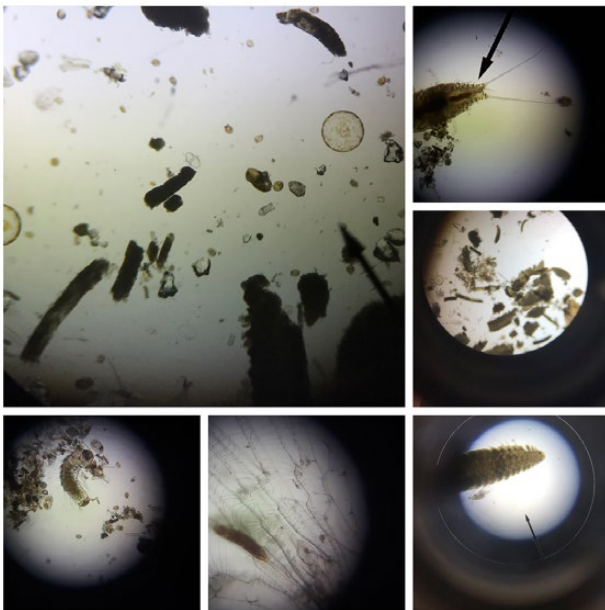
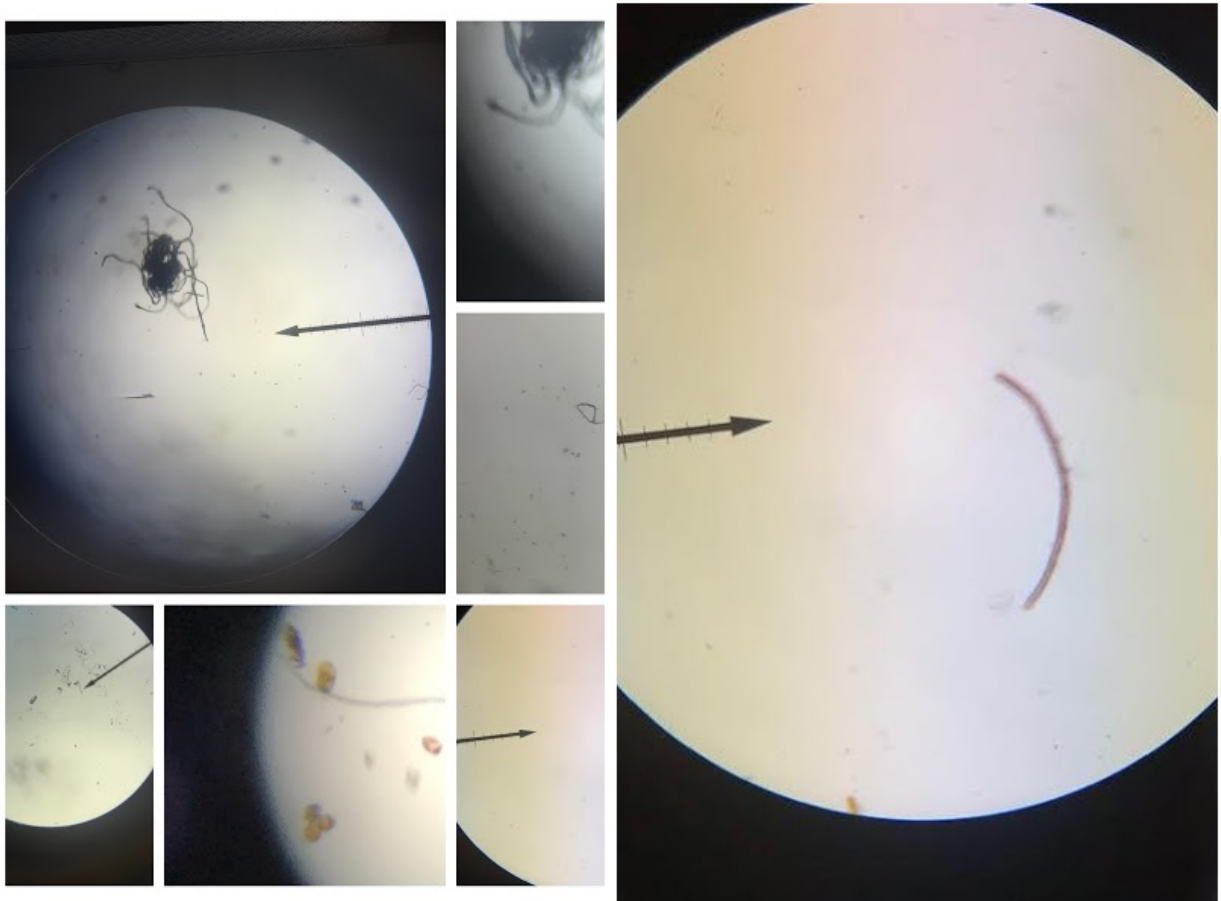


Figure 4 Our Photos of Microplastic



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