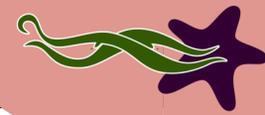


MICROPLASTICS AND MARINE DEBRIS INITIATIVE

QUARTERLY REPORT - WINTER 2020

Ucluelet
Aquarium
Society



LOCAL SHOPS HERE TO HELP US REDUCE WASTE IN 2020

What small steps can we take to reduce plastic?

We are very lucky that more and more local business are getting on board with reducing waste and providing alternatives to plastic. Did you know you can refill household products like hand soap and laundry detergent at The Den and the newly opened Frankly Tofino? You can find bamboo toothbrushes, reusable shopping bags, shampoo bars, cool travel mugs, and much more at shops all throughout our communities. The next time you're really in need of something new you can check local shops and likely find a low waste option. Shop local and let businesses know that reducing waste is important to you!

COME JOIN US!

Citizen science enables the public to make a direct contribution to research and gain insights about their environmental impacts. Citizen scientists also help researchers maximize the amount of data collected on a project!

With the help of citizen scientists, the Microplastic and Marine Debris Initiative has been successful in:

- 1)** Increasing available information on microplastic pollution on the west coast of Vancouver Island.
- 2)** Understanding the type and distribution of microplastic pollution in coastal sediment.
- 3)** Learning about the ecological impacts of microplastics in local marine environments.
- 4)** Sharing solutions and resources with the public about eliminating plastic consumption and waste

THANK YOU!

To our previous and current partners, sponsors, and donors!

**If you would like to support this project please contact our marine debris coordinator:
marinedebris@uclueletaquarium.org**

UPCOMING EVENTS:

2020 Microplastic sampling dates at Wickaninnish Beach :

17 January, 2020 @ 12:00 pm
14 February, 2020 @ 10:45 am
March, 2020 TBD

Meeting location: Beach in front of the Kwisis Visitors Center Parking Lot

Please note these dates are subject to change due to weather or other aquarium events. Keep an eye on our Facebook page for the most up to date information!



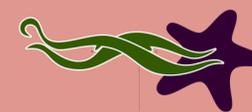
The Ucluelet Aquarium has been collecting data on microplastic pollution in the sediment of Wickaninnish Beach in Pacific Rim National Park throughout 2019. The surveys allow us to engage with locals and visitors to spread awareness about the impacts of marine debris to a broader audience.

Our goal is to build our Marine Debris Initiative and continue to encourage both our local and global communities to limit single-use plastic items and find plastic alternatives.

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OUR FINDINGS: 2019 IN REVIEW

Ten microplastic surveys were conducted monthly from January to November 2019, which collectively saw over 700 ml of microplastics from 100 square meters along the high tide line of Wickaninnish Beach. Total monthly microplastic volumes were graphed between January and November (Figure 1). Each month is further divided into the volume of each plastic type found (nurdles, Styrofoam, and hard plastics). In 2019, we observed that hard plastic pieces consistently make up an average of **60% of debris**, while nurdles make up **16%**, and Styrofoam makes up **25%**.

Our findings continue to show an increase in total volume of microplastics in the winter months, peaking at 286 ml in February, 2019. This data is in line with other findings that show the impact of seasonal weather and ocean patterns on microplastic distribution. The winter storms in the Pacific Northwest bring strong winds and waves that accumulate marine debris, including microplastics, on our beaches.

As we move forward into 2020, we will continue to monitor Wickaninnish Beach during our monthly surveys and will be working to expand our microplastic knowledge within the Pacific Rim area, perhaps using new techniques or surveying a new area.

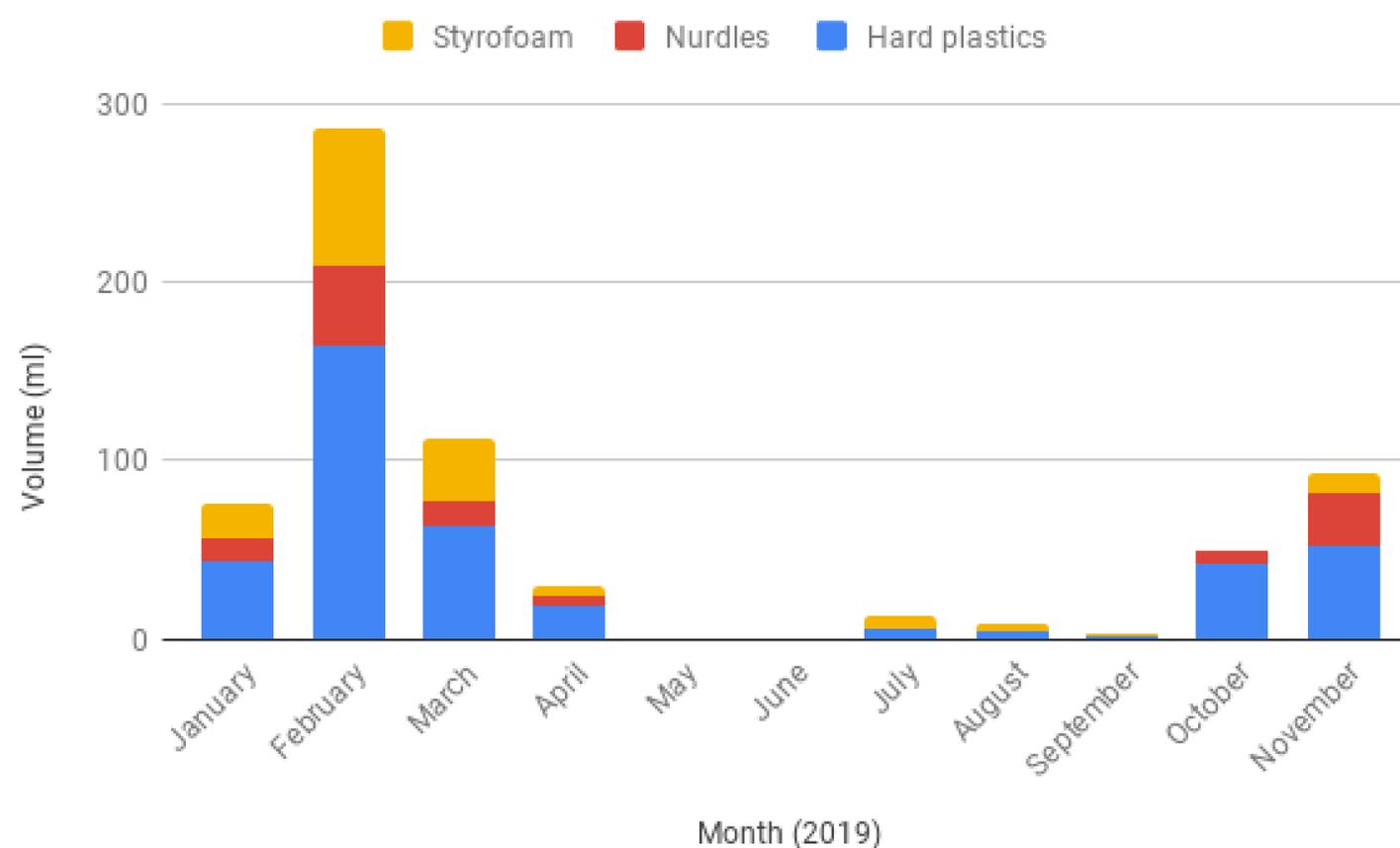


Figure 1. Total monthly microplastic volume (ml) for 2019, as well as categorical volume of hard plastics (blue), nurdles (red) and Styrofoam (yellow) collected from Wickaninnish Beach during monthly surveys between January and November 2019.