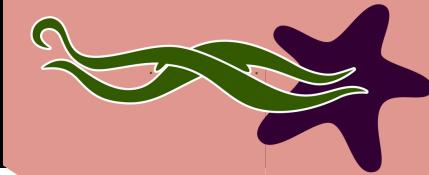


MICROPLASTICS AND MARINE DEBRIS INITIATIVE

ANNUAL REPORT for 2020

Ucluelet
Aquarium
Society



OVERVIEW

The Ucluelet Aquarium Society microplastic and marine debris initiative continued to run successfully through 2020, although with some minor changes. After February, the role of citizen science changed as safety protocols came into play. We unfortunately could not welcome volunteer citizen scientists to join our surveys for the remainder of the year, although we did our best to share our process and findings with our community! Due to the closure of Pacific Rim National Park Reserve, the April survey could not be conducted. Regular surveys continued for the remainder of the year. We would like to extend a huge thank you to everyone who continued to support the aquarium and our marine debris initiative this year from afar.

PLASTIC NEWS IN 2020

2020 brought about some major challenges for plastic-free living, but the dedication and hard work of many in our community kept up the fight against plastic. A special mention to our local Surfrider Pacific Rim Chapter for all of their hard work this year to combat plastic pollution both at the source and on the ground.

- 1) We learned that **reusable containers for food and drink remain safe** to use during COVID.**
- 2) Our local recycle and waste management service, SonBird, continued to work diligently to continue **ensuring proper recycling and disposal of waste.****
- 3) The **Marine Debris Tracking App** made waves and continues to be a great way to track marine debris data.**
- 4) The Canadian government **banned the 6 most prevalent single use plastics** in an effort to work toward zero waste by 2030**
- 5) Surfrider ran a very successful "**Take Back the Tap**" campaign as well as an **awesome short film festival** that had us all inspired to continue working toward a healthy and thriving coast!**

COME JOIN US!

We hope to be able to welcome volunteer citizen scientists to help us with our surveys back again in 2021.

Please keep an eye on our social media for updates regarding volunteer opportunities. If you are very interested to volunteer or want more info, please email us at marinedebris@uclueletaquarium.org to be added to our mailing list.

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

Please note that 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 since 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.

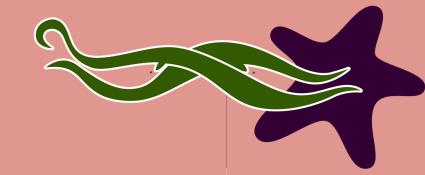
THANK YOU!

To our partners, sponsors, and donors!
If you would like to support this project
please contact our marine debris
coordinator:
marinedebris@uclueletaquarium.org

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OUR FINDINGS: January - December 2020

Eleven microplastic surveys were conducted monthly from January to December 2020, which collectively saw over **210 ml** of microplastics from **110** square meters along the high tide line of Wickaninnish Beach. Total monthly microplastic volumes were graphed between January and December, 2021 (Figure 1). Each month is further divided into the volume of each plastic type found (nurdles, Styrofoam, and hard plastics). In 2020, we observed that hard plastic pieces make up **68% of debris**, while nurdles make up **12%**, and Styrofoam makes up **20%**.

Our findings show that for 2020, there were some significant variations in the data. A January storm left us with almost no plastic as the storm surge swept plastic up into the trees and a calm summer left us with many months of finding very little plastic on the beaches. While we still saw more plastic in the winter months than summer months, as is consistent with our 2019 data, we also saw less plastic in total this year. However, we do not believe this to be a reflection of less plastic being present in the ocean. Some factors that may have contributed to less plastic on the beaches was frequency of storms, the direction of the swell, and the timing of tides. Less frequent storms can mean less ocean debris brought onto shore, different swell directions could leave plastic deposited elsewhere on the local shore and not where we typically survey, and the timing of tides can have us sampling a lower high tide line that may have less plastic debris.

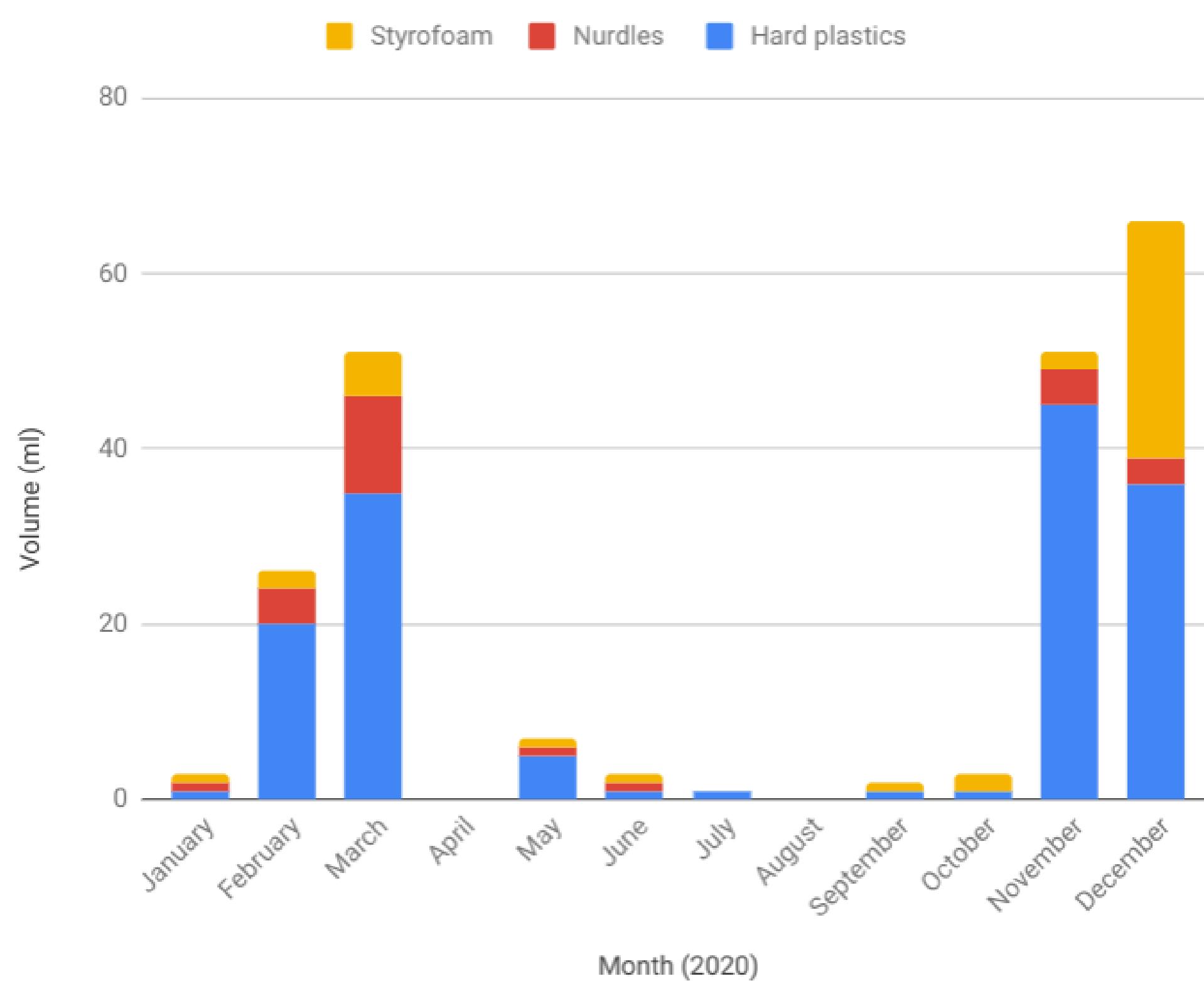


Figure 1. Total monthly microplastic volume (ml) for 2020, as well as categorical volume of hard plastics (blue), nurdles (red) and Styrofoam (yellow) collected from Wickaninnish Beach during monthly surveys between January and December, 2020.