



***Breakout Summary:***

An estimated 10,000 tons of plastic pollution enter the Great Lakes each year. As a consequence, microplastic particles are found in Great Lakes surface water, sediments, and fish. This contamination extends to our local sportfish and drinking water. This talk reviewed what is known about plastic in our Great Lakes and offered some science-based solutions.

***Presenters:***

- Jill Bartolotta, Extension Educator, Ohio Sea Grant
- Chelsea Rochman, Assistant Professor, University of Toronto

Watch a recording of the session here:

<https://vimeo.com/472319656>

Approximate times:

0:00 Introduction by Cathi Lehn, Sustainable Cleveland Manager, Office of Sustainability

0:10 Jill Bartolotta

6:30 Chelsea Rochman

43:53 Q&A

**Information and Resources Shared during Breakout:**

**Jill Bartolotta**, Extension Educator, Ohio Sea Grant ([bartolotta.2@osu.edu](mailto:bartolotta.2@osu.edu))

- Ohio Sea Grant: <https://ohioseagrant.osu.edu/>

**Chelsea Rochman**, Ph.D., Assistant Professor, University of Toronto ([chelsea.rochman@utoronto.ca](mailto:chelsea.rochman@utoronto.ca))

- <http://www.eeb.utoronto.ca/people/d-faculty/rochman.htm>

**From Jill's presentation:**

Grigorakis, S., Mason, S.A., and K.G. Drouillard. Determination of the gut retention of plastic microbeads and microfibers in goldfish (*Carassius auratus*). *Chemosphere*. 169 (2017): 223-238.

Platt, J.R. 2015. *Toxic Plastic Found in the World's Favorite Fish: Researchers discover that tuna and swordfish are eating microplastics contaminated with harmful chemicals*. Website: November 6, 2015. <<http://www.takepart.com/article/2015/05/07/micro-plastic-found-bluefin-tuna-swordfish-first-time>>.

Detecting Microplastics in the Marine Environment. Website: November, 2 2015. <<http://marinedebris.noaa.gov/research/detecting-microplastics-marine-environment>>.

**From Chelsea's presentation:**

Geyere et al 2017 <https://advances.sciencemag.org/content/3/7/e1700782>

Borrelle et al., 2020 Science: <https://science.sciencemag.org/content/369/6510/1515>

Hoffman & Hittinger, 2017 MPB: <https://pubmed.ncbi.nlm.nih.gov/27988025/>

Brookson et al., 2019 CJFAS: <https://cdns.cipub.com/doi/abs/10.1139/cjfas-2018-0388?mobileUi=0&journalCode=cjfas>

Mice: Deng et al., 2017 Scientific Reports: <https://www.nature.com/articles/srep46687>

Kolomijcaet al., 2020 ES&T: <https://pubs.acs.org/doi/abs/10.1021/acs.est.9b05994>

Mcllwraith et al., 2019: <https://rochmanlab.files.wordpress.com/2019/01/mcilwraith-et-al.-2019.pdf>

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NOAA 2020 Great Lakes Marine Debris Action Plan: <https://marinedebris.noaa.gov/great-lakes-land-based-marine-debris-action-plan>

**[The plastic pandemic is only getting worse during COVID-19](#)**

July 1, 2020

<https://www.weforum.org/agenda/2020/07/plastic-waste-management-covid19-ppe/>

Cora Ball: <https://coraball.com/>

I created a group that meets both in-person and remotely to pick up litter called Caws and Straws (it has a birding focus as well, hence the 'Caws') - <https://www.facebook.com/groups/543182609514675>

I work at the Port of Cleveland and we operate two debris harvester vessels on the Cuyahoga River/in the Cleveland Harbor. Happy to collaborate with anyone interested! Carly Beck:

[carly.beck@portofcleveland.com](mailto:carly.beck@portofcleveland.com)

<http://www.portofcleveland.com/environment-infrastructure/>

<http://www.rockthelake.com/buzz/2018/08/cleveland-port-boats-flotsam-and-jetsam-clean-cuyahoga-river/>

To continue this conversation, join the Sustainable Cleveland Plastic Reduction Working Group by emailing Cathi Lehn at [clehn@city.cleveland.oh.us](mailto:clehn@city.cleveland.oh.us).