EXERPT

the Hook
Fishing Lake Erie's Western Basin

Plastic Pollution: A Big Problem with a Simple Solution

By Jill Bartolotta, Extension Educator, Ohio Sea Grant and Stone Laboratory

The Problem with Plastic Pollution

Plastic…a magical material that will last forever.

From a production and materials standpoint, it is perfect.

From an environmental standpoint, it is deadly and wreaking havoc at an alarming rate.

The characteristics making plastic this magical material…malleable, durable, low production costs, lightweight…have allowed it to become the most commonly used material on this planet with 350 million metric tons produced each year (Geyer et al., 2017) and subsequently the most common material found during litter cleanup events.

Plastic accounts for 90% percent of the litter profile on beaches (Alliance for the Great Lakes, 2019) with 22 million pounds of plastic entering the Great Lakes each year, with half entering Lake Erie alone (Hoffman and Hittinger, 2017).

Plastic is everywhere – from the deepest depths of the ocean to the tallest mountains, in the air we breathe and the water we drink. Scientists have found plastic in every living organism they have studied from our largest creatures — whales — to the smallest — zooplankton.

Large pieces of plastic frequently entangle animals like snakes, birds, and marine and land mammals.

In Ohio, the most common items entangling our wildlife are monofilament fishing line, nets, and landscape mesh.

The smaller pieces of plastic known as microplastics — a plastic piece that is 5mm (size of a pencil eraser) or smaller- are being found in the gut contents of birds, fish, and mammals.

The most commonly found microplastics in organisms are plastic fibers from our synthetic clothing such as fleece jackets or other polypropylene materials —think workout and wicking fabric type clothing.

We have also found plastics in humans — in our blood, our gut, and our poop. We are breathing, drinking, and eating plastic fibers every day.
Preliminary research from the medical community potentially attributes the increase in gut disorders such as IBS and Crohn's disease to our intestine's exposure to plastics and plastic chemicals (Lu et al., 2019).

Disruptions to our endocrine systems, which controls our hormones that regulate every process in an organism, are also a result of our increased exposure to plastic chemicals and other chemicals such as pesticides, leading to a reproduction and fertility crisis (Swan and Colino, 2021).

Overexposure to plastics and plastic chemicals is not good news. However, you can significantly reduce your exposure through a reduced use of plastic items.

The Solution is Simple

A plastic littered planet does not need to be the norm.

Plastic is everywhere because we buy it. If we use less plastic, demand pro-environmental policies, and an economy (i.e. circular economy) that places value on reusable items instead of disposable items, plastics, and more importantly, single- use plastics, will be replaced by more sustainable alternatives.

We are the solution to plastic pollution.

It is time we work together to move away from single-use plastics and a throwaway society and move towards sustainable living and improved waste management practices.

The health of all living organisms and the planet depends on our swift action to clean up our mess.

Below are some tips and resources to start your sustainability journey.

Five Free Things You Can Do to Prevent Plastic Pollution

1. Make sure the lid on your garbage can is on tight and your trash is placed inside a plastic bag and not loosely placed in the bin. Loose trash and tipped over trash bins are a common cause of accidental littering.

2. Bring your own containers with you when you go out to eat to store your leftovers. This simple trick prevents you from needing to take home those pesky Styrofoam or non-recyclable containers.

3. Switch from body wash in a plastic bottle to a bar of soap…soap bars last just as long and they are usually cheaper than body wash! A win for you and your wallet.

4. Give experiences instead of things as gifts. If you still want to give a gift, wrap your gift in newspaper, cloth, or reuse a gift bag. Another win for you and your wallet.

5. Phase out single-use plastics you use often:
   - Bring a reusable bag when you shop or hand carry items if you are only buying a few things.
   - Refuse a straw when out to eat. If you need or want to use a straw, no worries, remember to bring your own.

- Get a lot of takeout? Skip the plastic bag, utensils, and condiment packets. We typically end up using the utensils and condiments we already have at home.