

PLASTIC MARINE DEBRIS: "A SERIOUS PROBLEM"

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Garbage is a serious problem that exists in every one of the world's oceans, including the waters within the Monterey Bay National Marine Sanctuary. Over the past 25 years, researchers have recorded evidence of debris up to 13,000 feet deep and 300 miles offshore from waters off the coasts of central and southern California, the Pacific Northwest, Hawaii, and the Gulf of California.

In the Monterey Bay National Marine Sanctuary, the majority of debris items are single-use, recyclable items with plastic shopping bags and aluminum beverage cans the most common. Plastic and metal were found more frequently than expected at greater depths, suggesting that the extent of debris on the seafloor may be far larger than previously thought.

Researchers have recently discovered micro-plastics in Arctic sea ice. Examining ice cores and factoring in ice melt, researchers anticipate that a staggering amount of plastic and synthetic trash could be released into Arctic waters in coming years. If other sea ice holds similar amounts of debris, and current ice-melt trends continue, more than 1 trillion pieces of these micro-plastics will be released from the melted ice into the world's oceans over the next decade.

Besides entanglement issues that impact marine mammals, sea turtles and sea birds, researchers have determined that as plastic breaks down into micro-sized pieces, is ingested as food by fish. Hundreds of species have been found with plastic debris in their gut.

Plastics have found their way into the oceans since World War II, and have increased as plastics transformed modern postwar life. Some of the sources are land based, including littering, dumping, poor waste management, storm drains, and extreme natural events. Ocean based trash from fishing vessels, stationary platforms, cargo ships and other vessels also add to the ocean waste. The problem came to the public's attention when Captain Charles Moore raised a red flag and created the visual of a plastic wasteland in the Pacific Ocean as big as the state of Texas.

Scientists and researchers aren't optimistic about the situation and predict that the amount of plastic production will not be reduced in our lifetime. The rate of new plastic production is vastly more than recycling can handle.

On a positive front, there are groups that are attempting to take plastic debris from the oceans and turn it into fuel and more recycling plants are in operation around the globe.

As scientists believe that 80% of marine debris comes from land sources, we all need to reduce our consumption of single-use plastic bags and bottles. We must urge bold policy action, help educate consumers, and support practical solutions, like "hydration stations" that eliminate water in plastic bottles at public events. While it may not be easy, everyone can help by refusing single use disposable plastics. Help by reminding yourself and others that single use items are a dangerous ocean pollutant. And remember that reusable water bottles are a great first step.

MBNMS Symposium Panel

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