

Microplastics

Introduction

Do you know that in the Atlantic Ocean there are 12-21 million tons of microplastic? This is a recent discovery led by the National Oceanography Centre, who went through layers of the upper 200m of the ocean in the middle of the Atlantic. Also did you know that the plastic that is floating in the ocean that we see represents only 1% of the whole amount. Now scientists are filling the gaps of our understanding of where the other 99% of plastic is.

What are microplastics?

Microplastics are not just one type of plastic but are any plastic fragment that is less than 5mm in diameter. They can be microbeads which can be added to toothpaste and exfoliations, they also can be created when larger plastics decay and break down and 60% of clothing is now made from polyester, which is a fabric that sheds tiny strands of plastic every time it is washed. All plastics do not rot or go away like wood and other natural materials but instead spread out over time.

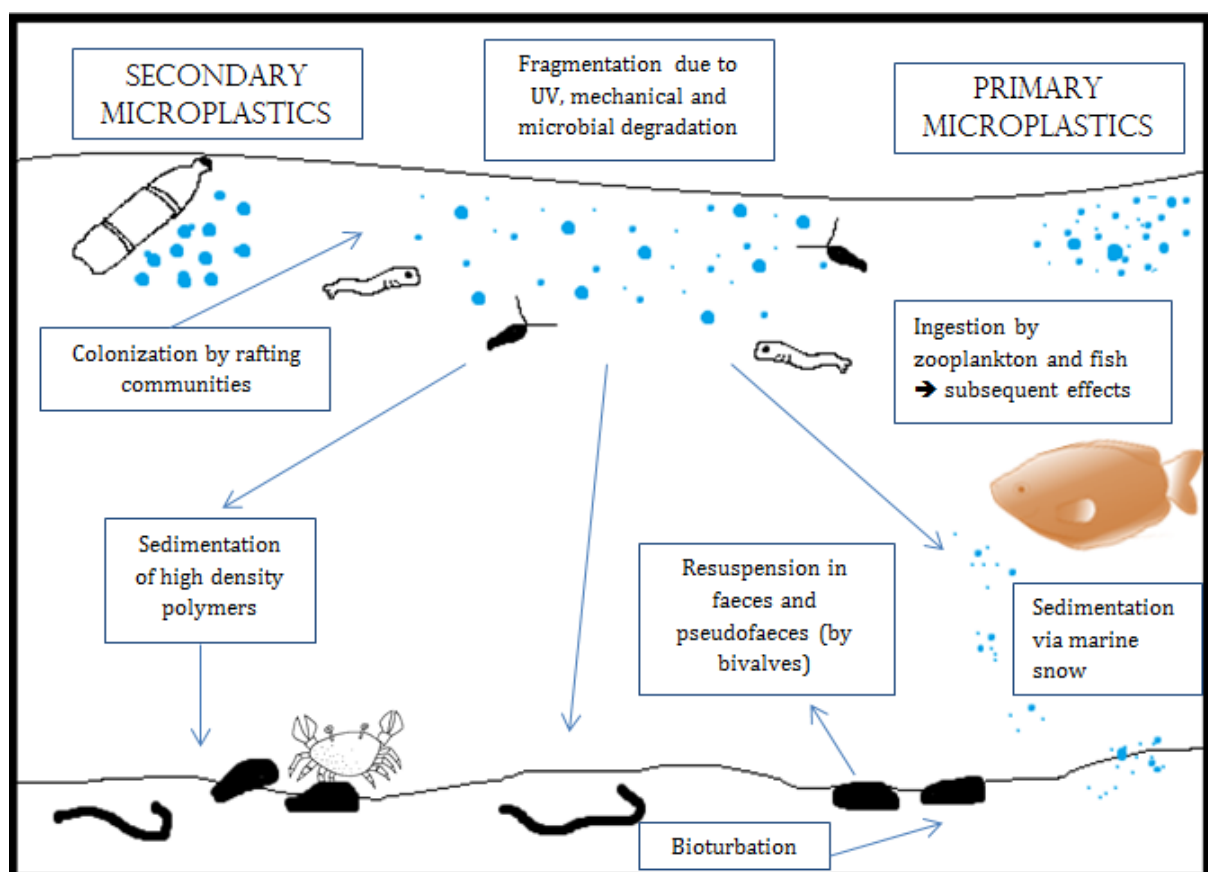
Recent scientific research

Dr Katsia Pabortsava from the National Oceanographic centre, who led the Ocean Sieving Expedition said “Previously, we haven’t been able to balance the amount of plastic we found in the ocean with the amount we thought we put in. That is because we weren’t measuring the smallest particles.” They used a giant ocean-going sieve to search for microplastics in the upper 200m of the Atlantic. This contraption was able to filter large volumes of water with the opening having a diameter finer than a human hair and they discovered that the amount of microplastics in the Atlantic was much larger than previously estimated.

In addition, Dr Ian Kane from Manchester University got an international team together to find out where the other 99% of plastic was. What they did was examine large chunks of the seabed near Italy and found out that microplastics were a hotspot where there are sediment mounds. There are ocean currents that transport microplastics to the same places where fragile ecosystems depend on fresh oxygen and nutrients to survive. When the ocean currents deposit sediment it is like underwater sand dunes. Their analysis showed 1.9 million plastic fragments per square metre at the bottom of the ocean.

How does this effect marine life?

The plastic we can see is already affecting marine life because the marine animals are ingesting or getting tangled up in the plastic. But what about microplastics which we cannot see because they are extremely tiny. In the ethical consumer magazine, an article on microfibers, states that microplastics “clog up marine organisms intestinal tracts, suppress their hunger by making them feel full and cause infertility and they also damage corals (one of the most effective protections of the effects of climate warming).”



What can we do about this?

In conclusion, this latest scientific research has shown that this problem with marine plastic pollution is much larger and more important than ever before. Action needs to be taken but will be most effective if people stop using single use plastic in the first place. If you want to know more about this issue and give your support visit the Shift Platform.



By Emma Catterall