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# Butts Out of the Ocean

Gemma Alexander | November 5, 2018



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A photo of a sea turtle with a straw stuck in its nose awakened Americans to the problem of the Great Pacific Garbage Patch (GPGP). But the image was so strong that most viewers fixated on the straw. Straws are a single-use source of plastic waste for sure. But straws make a minuscule contribution to the GPGP. Most of the waste in the Pacific garbage gyre is old fishing nets — something few people have any influence over.

When it comes to consumer items that make their way to the sea, cigarette butts may be the most significant contributor of microplastics and litter.

## Cigarettes and Litter

Cigarette butts are consistently the most commonly found form of beach litter. In 2014, volunteers from the Ocean Conservancy’s International Coastal Cleanup collected some 2 million cigarette butts — a huge amount, but just the tip of the iceberg. Despite creative attempts to recover them, approximately 4.5 trillion of the 6 trillion cigarettes consumed annually are littered across the globe.

Cigarette filters comprise thousands of tiny particles of cellulose acetate. That’s the same material used to make sunglasses. The technology for recycling cellulose acetate is readily available. But cigarette

butts also contain pieces of tobacco. Fears about contaminants and the repercussions of China's recycling ban mean most recyclers won't accept cigarette butts.



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## Ocean Impact

The tiny particles of cellulose acetate in cigarette butts join millions of other microplastics in the ocean. But their impact could be much larger than other forms of plastic pollution. A San Diego State University study looked at the toxicity of cigarette butts to fish. They found a single butt in a liter of water was toxic to both fresh and saltwater fish (the study used fathead minnow and topsmelt).



CIGARETTE BUTTS ARE CONSISTENTLY THE MOST COMMONLY FOUND FORM OF BEACH LITTER. IMAGE: ADOBE STOCK

## Solutions

Recycling butts is not economically feasible, and smokers seem to be resistant to proper disposal.

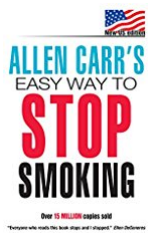
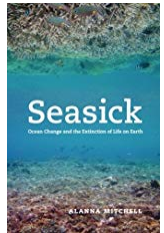






The City of San Francisco charges a 60-cent litter fee per pack of cigarettes. It's far from certain that the fee has had any impact on littering. Making cigarettes prohibitively expensive through taxation could reduce the number of cigarettes sold, but tobacco companies make it hard to pass new taxes. One company, Greenbutts, is working to develop a biodegradable cigarette filter. Cigarettes using their design are not yet available. But they could get a boost if the Cigarette Butt Pollution Project is successful in its attempts to ban cellulose acetate cigarette filters. Biodegradable filters would cut down on microplastics. However, they would not reduce the toxicity of littered filters that end up in bodies of water.

In the three R's of environmentalism, "reduce" is the most important in the case of cigarette butts. Reducing smoking is the easiest way to cut your butt pollution. Switching to unfiltered cigarettes is also the most overlooked option, because who really wants to encourage smoking? In the case of cigarette filters, it may be the only option. Filtered cigarettes are not proven to be healthier than unfiltered, and may actually be worse because they encourage people to smoke more. A return to unfiltered cigarettes would reduce the waste and toxicity of cigarette filters.

Or maybe, just don't smoke? Do your insides the same favor you're doing for the environment: Clean it up.

Feature image: TheFreak1337, Pixabay

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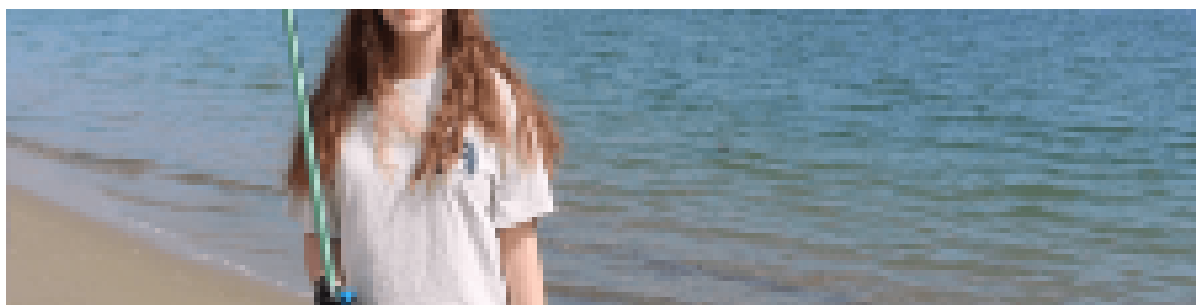
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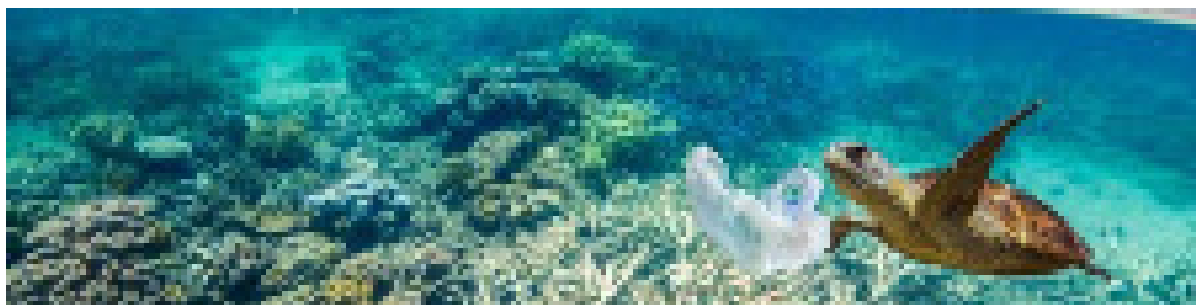
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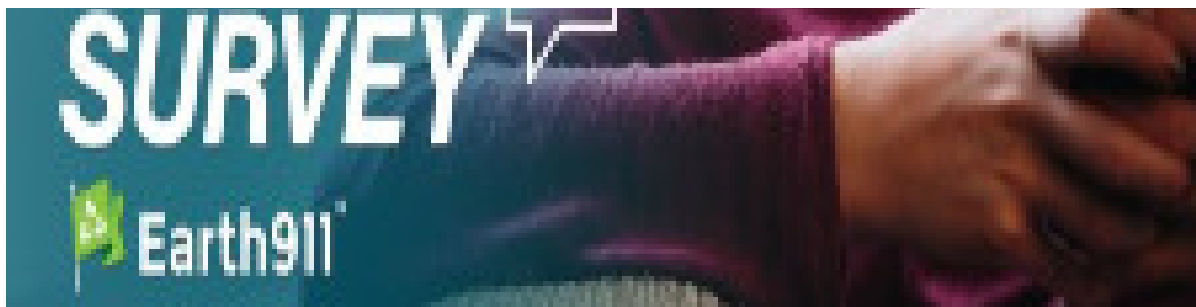


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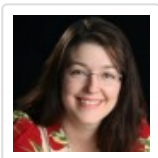




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#### Gemma Alexander

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).