

## What Have We Done?

Melissa Birchfield

Ceaselessly lapping the land, the ocean has embraced our shorelines for centuries. It has borne our ships to uncharted lands and summoned up an abundance of marine species for our sustenance. It has been the inspiration of artists, stimulus of adventurers, playground of children. And now it has become our trash receptacle.

On their way back from the bus stop, some little boys share sweets as they skip along. One of them flicks a candy into his mouth, and, laughing, dangles the wrapper over a sewage drain. His friends goad him on; he doesn't think twice. The plastic flutters, glints, and drops. It whirls down through the metal bars and disappears into the shadows.

It was just a bit of fun, giggled over and forgotten. Yet it will come back to haunt him.

That night, the boy's older sister scrutinizes her face in the mirror. Squeezing a facial scrub into her washcloth, she then proceeds to wash her skin vigorously. It is her nightly ritual. Within this cleanser, tiny polyethylene beads glitter under the euphemism "micro-exfoliates" (Johnston). The faucet running, all of it swirls down into the drain, and the micro-exfoliates are swept away to the ocean. They, too, are plastic.

She may have cleansed her face, but she has clogged her future.

The ocean won't mind. The ocean is so vast, it won't make a difference. That's what we thought. Or maybe we weren't really thinking at all.

Daybreak. The ocean undulates, shards of sunlight catching in the ripples. A bird dips, braking slowly to land on the surface. As the splashing noise dies away, the bird bobs contentedly.

Beneath the waves, sound is dampened. A strange yet peacefully endearing kind of silence reigns, almost as if this were a cathedral. Spears of sunlight illuminate a vast expanse with stained-glass vibrancy, and all is glowing turquoise. The water pulsates with life.

From somewhere miles off, a low, whining song throbs like a heartache. Slow and methodical, gray shadows drift in and out of visibility.

Movement darts to the left. Veering as one, a school of fish cuts through the water, pursued by fur seals. The seals thread relentlessly through the sun-laced waters; bubbles escape from their fins. They twist and streak along like stunt planes. Another seal zips in, but something is flapping around its neck.

Plastic.

Yes, our streets and countrysides are strewn with plastic odds and ends. Our beaches are fringed with plastic residue: washed-up nets, lines, buoys. But this is the middle of the ocean, far from any land. Shouldn't there be almost no trace of human activity?

The sad reality is no. Our discarded plastic is gathering vengeance, building an army, growing with alarming stealth out at sea. Caught in spiral currents called gyres, the plastic collects in masses, and once there, it never leaves. Monstrous islands of plastic “span hundreds of miles” (Winter). They are nightmares come to life.

Toothbrushes, bottles, toys – they join a pinwheel of debris, a swelling blister. The flotsam and jetsam of our human lives assemble there, day after day. Fragments of white, blue, green, yellow, and red blend into a kaleidoscope of colors as the gyres spin like permanent fingerprints (Eriksson and Burton).

This young seal has been cavorting around such a garbage patch, and she has found a “lethal necklace” (Gregory). She nosed into one of the rings of a six-pack soda carrier. Now she cannot get it off. As she grows, the packaging will strangle her.

What looked like a playground, little seal, what looked like a jungle gym was a lure, a trap. Couldn't you hear your death knell? It will be a slow and painful end, your silent murderer severing the life out of you.

Countless other creatures meet such an untimely end, ensnared in fishing nets or other plastic items. There they drown. They suffocate. They starve, or they exhaust themselves trying, in vain, to swim free.

Plastic kills not just by outward force, but also internally. When seabirds consume plastic, it crowds out room in their stomachs. There is less room for actual food, which means the birds must eat less. Even if they do not directly die from malnutrition or starvation, they still suffer in functional ways. Chemicals seep from the plastic into the bird's cells, causing “DNA damage” (Johnston). Some birds deal with diminished muscle ability or deformed skeletons. Sometimes they experience distorted reproduction.

Seabirds, how can you keep regurgitating food to your young, when by doing this you are killing your chicks? You are bloating their bellies with poisonous plastic, which will accumulate until they die. It is not your fault. You intend to help them live; still, you are only hastening their death.

Yet there is destruction even more subtle than this.

The water heaves and probes at the plastic piles, while ultraviolet sun rays work their decomposing magic. But plastic is made to last and it does. It bursts apart, trillions of particles floating in the water.

They brood there, indestructible pellets, sucking up chemicals like DDT and PCBs. They gorge themselves so much that “a single plastic microbead can be one million times more toxic than the water around it” (“The Plastic Problem”).

Unsuspectingly, these invisible granules are consumed and infiltrated into entire ecosystems. They permeate the very pores of the world. Who knows where they end up, predator receiving from prey, generation after generation?

The little boy and his sister go on with their lives, tossing wrappers away and daily washing microbeads down the drain. They discard plastic bags and cups and packaging. Some of these find their way out to the ocean, becoming concentrated in gyres or bobbing alone. The plastic builds up year after year, yet the siblings have no idea what they have done.

Fish graze on zooplankton, accidentally ingesting small pellets. Sea turtles confuse grocery bags for gelatinous invertebrates. Birds purposefully pick up plastic pieces, mistaking them for food as well. From organism to organism, plastic finds its way up the food web. And if we eat what we catch from the ocean?

We will be consuming the garbage that we thought we had thrown away forever.

Plastic is deceptive. *A jellyfish*, thinks a sea turtle. *Fish eggs*, thinks a gull. *No big deal*, thinks mankind.

Indeed, we are our worst enemy.

Think again, for the sake of our health, for the sake of our dignity. Our scientific progresses have outrun themselves, and our concept of stewardship has lagged. We’ve left it far behind in the dust. Now it comes back to slap us in the face.

We are running so fast that when it slaps us, we are going to slip. And if we fall, the ocean will not be a gentle sustainer to buoy and support us. It will be so brimming with plastic – our own doing – that we will not have a way to get out.

Water means life. We are redefining it into death.

Somewhere, out in the ocean – far away yet closer than we would admit – lies the carnage of those animals which have been entangled in plastic, filled with plastic, poisoned by plastic. Their soundless cries have fallen on the deaf ears of oblivion. When the plastic finally comes up into our seafood, into our bodies, then maybe we will start listening.

By then it might be too late. The little boy and his sister will share a meal, but they will not realize that they have eaten their candy wrappers and facial cleanser until they fall ill.

Those gargantuan islands gloat over the water. Unceasing ocean currents bring more plastic to infect the ecosystem. More and more it comes; larger and larger the patches grow; no one thinks, and no one cares.

The once-clear waters are eerily chockfull of little particles. No more whale songs, no more seabirds, no more lively races of seal and fish.

Our plastic grocery bags drift in the inky silence, like ghosts.

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## Reflection

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While researching about pollution in the oceans, I was shocked that there were so many different ways that plastic harms our environment. However, most people simply do not know how serious of a problem this is. We are extravagant and careless with our plastic trash, and we are completely unaware of the damage we are causing.

My writing is a blending of story, facts, and thoughts. They all flow together, building upon a sense of doom. I did not want a happy ending; I wanted to illustrate our current trajectory and the end that we will meet if we do not change our lifestyle.

I especially emphasized the pristine splendor of the ocean and the creatures that swim in it. The marine world is both essential and beautiful, and we should want to preserve it instead of wreaking havoc.

I remember vacationing on the South Carolina coast every summer. The water was vast, and the air smelled like freedom. The beaches were white, stretching from pier to pier. But it was always those little pieces of trash that left a sour memory: forgotten tobacco tins, stray popsicle wrappers, unidentifiable broken bits.

I do not want our world to be overrun with plastic. I believe we have an obligation to take care of this world. How we deal with our plastic is an imminently large part of that. Recognizing this responsibility is the first step toward eliminating plastic pollution and rescuing our future.