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DOWN THE BEACH, A PLUMP YOUNG SEAL tosses around a plastic soap bottle drifted in from the farther side of our small world. A different young seal that came ashore while we were working has a plastic packing strap stuck around its body, just past its flippers. That's potentially lethal, because it could cut through the skin and flesh as the seal grows. We have a pair of pruning shears for just this purpose. This particular seal had previously gotten stuck in a different packing strap. So that's odd. A few days ago we found one with a loop of rope and some gill-net on him, lying snug against a big heap of hawser rope that had drifted onto this shore.

A lot of fishing nets drift great distances before hanging up along beaches. Some fishing gear washes overboard in violent storms. Some is purposely jettisoned because it is easier and cheaper to dump unwanted nets and lines at sea. People have often found seal pups, fish, whales, turtles, and seabirds—alive and dead—tangled in discarded nets.

Human thoughtlessness continually clutters this and just about every other remote coast. Here in the middle of the Pacific, thousands of miles from the nearest continent and hundreds of miles from the nearest inhabited island, the colorful shoreline is a jetsam jubilee, a festival of cast-up trash.

This shoreline is a beach of burden, staggering under a bright array of mostly-plastic rubbish that would look striking on a poster. The strand line is a wide band of bottles, floats, shoes, tires, plastic—everything from boogie boards to booze bottles. If you're on the beach, you're seldom more than a few paces away from something that doesn't belong on beaches.

A quick scan around confronts your eye with plastic beverage bottles, pieces of plastic pipe, empty containers of everything from laundry detergent to talcum powder to chocolate syrup. And various cast-up footwear. Glass bottles abound, too. Here's a bottle saying Coca-Cola in English on one side and in Japanese on the other.

An albatross chick drags its fat belly across the sand and then digs a little divot for itself next to a piece of rusted metal. There are a lot of coconuts on the beach, and some beautiful shells, like this large, gorgeous

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spiral snail about twice the size of a fist. Little red shapes sometimes turn out to be shell fragments and sometimes plastic bits. Plastic bottle tops are prominent. There's a desiccated mummy of a unicornfish, its spines fixed and formidable, its eye sockets vacant, its mouth frozen in eternal surprise. It lies amid the cowries, clams and barnacles—and trash.

Three adult Laysan albatrosses rest next to what looks like a dark glass fishing-net float on the beach. For some reason, the clear, spherical glass floats—many of which have probably floated around the Pacific for decades—have universal aesthetic appeal. Like most people, I find them quite attractive. But on closer inspection, this sphere turns out to be a bowling ball.

The debris piles up at certain spots. On the south point, a hellacious concentration of trash, plastic fishing floats, and bunched-up fishing net stretch for a quarter mile. The northwest side of the island is a postcard of debris of the central Pacific. It's a monk seal obstacle course, with seal tracks threading their way among buoys and bottles and balls.

The Black-footed albatrosses here densely nest among a psychedelic garden of round plastic fishing net floats, colored to be visible on the sea. It's a surreal sight—big dark birds among big colored bubbles on a white sand beach against the blue ocean—like someone's bad hallucinatory trip. To paraphrase Coleridge: garbage, garbage everywhere, as nobody thought to think. You would not guess that dumping plastics into the ocean has been illegal since the early 1990s.

Some of the debris is bizarre: Flashlights. A fake-grass welcome mat. A plastic wheel from a child's tricycle. A big coffee pot and a scrub brush. Half a kitchen cutting board, well used. Suddenly there are three umbrella handles within three feet of each other, as though several people had been swept to their death together in a torrential rain and washed far out to sea, with only their umbrellas making the voyage all the way here.

Every few steps reveal new types of junk: A golf tee. A small perfume bottle. A plastic folding hairbrush. A toy cowboy. A thread spool. A vacuum tube from an old television set. A syringe. A refrigerator door. Small rubber balls. A human skull—of plastic. A toy truck. Toy soldier. A three-inch plastic dinosaur (*Tyrannosaurus rex*). A plastic elephant. Plastic cat. Even some of the fish on this beach are plastic ones.

The warm Kuroshio Current streaming past Japan, whose waters eventually pass Hawai'i as the North Pacific Current, is troubled with trash coming from Asia because that's the direction the flow takes it. This trash, conveniently swept from its sources by the grace of moving water, gets inflicted on the ocean's wildlife.

As you'd guess, the middle of the North Pacific isn't the only place with this problem. In the middle of the South Atlantic, to give just one example, at an island appropriately named Inaccessible—uninhabited, seldom visited—bird researchers Peter Ryan and Coleen Moloney documented “exponentially increasing” accumulations of litter, mostly plastic from South America, 2,000 miles distant.

Here on Laysan Island, someone once found a sign saying in Japanese, *SAVE OUR OCEANS AND RIVERS—DON'T POLLUTE.*

I continue walking. Here's an insulated beverage container from a brand called Kansai Attaché. It reads: “The power of nature to suit the mind of the city dweller.” I find myself poetically inspired to answer their empty-headed slogan with a haiku:

*City dwellers' trash
Fouling shores of paradise.
More is on the way.*

Like many of the beaches I've traveled, this beach also bears multitudes—tens of thousands—of chemical lightsticks. In the world's oceans they're used by the millions to attract swordfish and tuna to baited longlines. Also abundant: fishing-net floats of oblong foamy plastic. They're probably from the super-scale “curtains of death” driftnets of the 1980s and early 1990s, still floating around, still causing problems.

People here say they've seen adult albatrosses regurgitate these floats and pass them to chicks. At six inches long and two inches wide, the floats would occupy a lot of space inside an albatross that should go to food.

These fishing implements hint toward pressures untold and uncontrolled on the Pacific's underwater wildlife. We use these implements to empty the oceans, and then the sea itself casts them up to heap havoc on the remotest shores. From the time this fishing gear is manufactured, everywhere it goes—it's trouble.



Courtesy of NOAA

I'd noticed several hooks hanging in the cooking tent. One of them looked like a halibut hook. One was a shark hook. The crew found them next to bird nests. Two days ago, an albatross chick had a braided plastic cord emerging from its throat. Others have had monofilament line hanging from their mouths. Likely they've swallowed hooks.

I wonder what happens then. A few steps farther is one small albatross chick's carcass with bright bits of plastic sticking through its ribs. You get the feeling the plastic will remain here even after the bones themselves bleach and pulverize into dust and blow away. A little farther along lies another dead albatross chick, its whole rib cage packed with plastic—various shades of blues, pinks, orange, various pieces of bottles, and even the plastic legs of a toy soldier. And a colored cigarette lighter. Lighters are one of the more horrifying—and more common—things you see in these dead chicks. This fresh carcass seethes with maggots, making the bits of colored plastic look woosily alive.

In fact, every decomposed chick carcass seems to have plenty of little colored bits of plastic. You can often tell where chicks died last year because piles of colorful plastic particles that used to fill their stomachs now mark their graves like Technicolor tombstones.

It is unlikely that any living albatross chick on the island is free of plastic. Pacific albatrosses eat greater volumes and more varieties of plastics than any other seabird. Of 109 identifiable plastic items found inside Laysan albatrosses in a formal study, 108 had originated in Japan. Plastic can't be good for the birds, and it must kill a few. Large volumes of plastics might give a false sensation of satiation and suppress their appetites. This may be enough to starve or fatally dehydrate chicks already in poor condition. Birds may absorb toxic chemicals from plastics and other artificial things they swallow.

One coughed-up bolus contains both natural and unnatural items: a couple-dozen squid beaks and several smooth pumice stones light enough to float, plus a couple of plastic bottle caps, and a bit of gill net festooned with fish eggs. Mere eating has turned high-risk for the albatrosses.

On the ground is a lot of pumice that albatrosses have eaten and spit up. We know that in this part of the ocean, fish eggs are sometimes adhered to floating objects. This might be the best clue to why albatrosses eat hard plastic—they probably eat naturally-occurring drifting objects for the attached egg masses and other digestible creatures growing on them.

They've been eating pumice for millennia, and it's likely that they've simply transferred the habit to anything swallowable that floats, like cigarette lighters. The pumice the birds disgorge is rounded and worn smooth. But the plastic can break into sharp shards that can block the esophagus or stomach, or cause internal tears or punctures.

I come suddenly upon a strange opaque black bottle in the sand. Its rounded bottom attenuates into an elegant neck with an unusual cap. It's a genie bottle, certainly. For the world's oceans, the evil debris genie has already been uncorked; mere anarchy loosed upon the world—and it seems there's no putting it back.

A sleek adult Laysan albatross—gliding in low on seven-foot wings—has probably flown thousands of miles to get back here. She settles her dark wings over her snowy back for the first time in days. Her feet have not touched anything solid, nor have her legs supported her weight, for perhaps two weeks. She surveys the scene through lovely, dark, pastel-shadowed eyes, then calls a rusty-gate-hinge "Eh Eh Eh."

A chick immediately comes over, calling. But she knows it's not her chick's own voice, and she continues waddling along, calling and looking. Another chick answers, also hoping to con her into misplacing her precious cargo into its crucial belly.

One by one, five more chicks come begging and calling as the albatross continues walking along. Each chick that rushes forward gets a sharp rebuke from her hooked bill. Except one.

The adult begins directly approaching the last of this line of hungering hopefuls. But she veers away from it at the last moment (perhaps the voice seemed familiar, but the scent was wrong?). Another youngster, much more developed, comes hopping, jumping, and flapping across the road.

She ignores it.

Our adult walks about thirty yards farther. Over there, a chick has just started calling. And to this call, she is responding, calling softly, matter-of-factly, with little excitement or energy. She simply walks directly to the chick.

Parent and youngster meet and greet, the adult acting confident that this is the right child. People often seem incredulous that seabirds can recognize each other among thousands. But give them a little credit. We recognize voices on the telephone. We can recognize each other in cities among millions. And we do so without the sense of smell so well developed in other mammals and in albatrosses.

Considering the life-or-death stakes involved in recognizing your own chick or parent or mate, animals certainly evolved proficiency for recognizing individuals a long, long time ago. We've merely inherited that capability from much earlier ancestors. But, bubble-wrapped within our estrangement from our extended family, we fail to appreciate other animals' competencies. We withhold recognition of their cognitive abilities. Blinded to stark evidence of our relatedness to other living beings, we heap praise on ourselves for supposedly "unique" abilities, whose origins are so plain and so much better accomplished in birds and bees.

The whining chick begins eagerly nibbling the adult's bill with its own clattering mandibles. Its ravenous aggression seems nearly to overwhelm the adult, which at first tries to duck the advances. But the bill-battering builds and this necessary food foreplay works as usual to stimulate her into regurgitating her delivery load. The adult hunches forward, neck stretching. The chick, with sudden frenzied expectation, thrusts its bill up tight to the adult's gaping mouth, forcing her wider and wider open.

The adult abruptly pumps out several thick boluses of food: semi-liquefied squid and purplish fish eggs, which the chick bolts down. Both pause. Then the chick renews its drive for more. The adult arches her neck and is retching, retching. Nothing comes. More retching.

Is something wrong?

Slowly, the tip—just the tip—of a green plastic toothbrush emerges in the bird's throat. The sight is surreal—so out of place, so wrong, that my racing mind is interrogating my eyes over and over: Are you sure that's a toothbrush?

The chick, in a flurry of furious hunger, presses.

With her neck arched, the mother cannot pass the straight toothbrush. She re-swallows it and several times repeats the attempt to bring it up. Each time, she cannot pass it fully out.

It's one thing to find plastic items on the ground and know the birds have carried them, but seeing this bird in distress, this vital mother-child interaction interrupted, is very hard to watch. It's one of the most piercing things I've ever experienced.

The parent albatross re-swallows a final time and, with the toothbrush stuck inside her, wanders away from her chick.

In the world that shaped albatrosses, the ocean could be trusted to provide only food; parents to provide only nourishment. Through the care-bond between

parent and offspring passes the continuity of life itself. That the flow of this intimate exchange now includes our chemicals and our trash indicates a world wounded and out of round, its most fundamental relationships disfigured.

The main message from the albatross is this: No matter what coordinates you choose, from waters polar, to solar coral reefs, to the remotest turquoise atoll—no place, no creature remains apart from you and me.

A few albatrosses still fly who were already ranging the vast and open ocean when, holding my mother's hand, I walked to my first day of kindergarten. Many of these birds knew the sea before it became so filled with plastic bottle caps and cigarette lighters; before the strain of driftnets, before boats with multi-mile longlines laced their feeding grounds with hundreds of millions of tantalizing hooks.

To share close quarters among creatures that mastered a world so different—within their lifetime and your own—is to realize how abruptly we've changed even the farthest reaches of the planet. Unlike deforested or urbanized landscapes whose alterations plainly show, the ocean rolls on as always. But once you perceive the message of the albatross, the ocean's deceptively constant surface no longer fools you. Once you see and feel the disparity between what animals learned to expect and what they now get—when you see over and over how traits and habits fine-tuned for survival seem turned against so many living beings—the world seems on fire.

Seeing a parent albatross gagging up a toothbrush brought me a new view. In my mental map, society no longer stops at the borders of continents, or of species. The world is no longer small enough for that. We've woven the albatross into our society. That creates a certain moral obligation. Fortunately, recognizing limits means seeing the opportunity to create a better world.

Less trash, less habitat destruction, less contamination, less atmospheric disturbance, and less overfishing, would mean more life.

We need the birds and the seas more than they need us. Will we understand this well enough to reap all the riches that a little restraint would engender?

Nothing could prepare albatrosses for the changes that have come in the flash of one long lifetime. Our calling cards, in waters and upon the winds, cycle through all living things. In all the far reaches of the wide, wide seas, every single bird, fish, mammal, and turtle carries the trademark of human chemical manufacturing within its cellular tapestry. Antarctic penguins, who'll never suspect that the world contains so many people, carry the imprint of humanity in their

flesh; in the Arctic, some polar bears now have the deformity of having both male and female sex organs, the result of hormone-mimicking contaminants acquired in the womb from their mother's food; from us.

But don't pity just them. We have also made ourselves subjects in a new but uncontrolled experiment. No less than a mother albatross delivering cigarette lighters and toothbrushes, a human mother has no ability to avoid the pesticides, food additives, hormones, hormone mimics, antibiotics, PAHs, POPs, and other unsavory alpha-bits spelling trouble and signaling SOS to a world newly transformed by modern manufacturing and chemical agriculture.

Like toothbrushes—but invisible—this hazardous soup comes between every mother and child. No nursing woman can avoid pumping a stream of industrial by-products into the pure new life at her breast. No less than in the sea, no less than to the birds and seals and turtles, many of the changes affecting us arrive unrecognized for what they are.

And so the albatross speaks to us of how much the world is changing, and how little difference exists between us—and of what it means to be kin and sibling in the net of time and events that enmesh us all.

Four centuries ago, poet John Donne posited that no person is an island. Four hundred years later, not only is no person an island, no island is an island any longer.

Albatrosses inhabit a few islands. Humans inhabit only one island, a blue and white marble in a fragile bubble, adrift in the great dark sea of the universe.

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