

How we killed paradise with plastic:

Grotesque consequences of our casual throwaway culture

By DAVID SHUKMAN

The sea surrounding the remote Pacific atoll of Midway is vivid turquoise, the sky a deep blue. At first sight it is a paradise, a nature reserve for two million Laysan albatrosses. But then you look again. Where there ought to be a pristine beach, there is rubbish. Tons of it, rope, shampoo bottles, computer casings, plastic sheeting, fragments of artificial white and blue.

Most numerous are disposable cigarette lighters. One bears the name Happy Garden, a motel in Taiwan. But there is nothing happy about this scene. Our casual, throwaway culture is killing the albatrosses and building up a toxic cocktail that could eventually infect everything living in the oceans.

I became the BBC's environment and science correspondent in 2003. After 15 years as a foreign reporter, part of me worried that the environment brief would feel tame, even dull.



Most significantly, if I thought about it all, I'd have described myself as cynical about green causes and distrustful of the sincerity of some environmentalists. If pressed, I'd have declared myself sympathetic to the view that economic development in a capitalist system is broadly a good thing, that industry, cars and jets have improved our lives. Then came a line from my editor so persuasive that I'd have been a fool to even hesitate: the job would be global. I was to

cover anything I might see featured on the front of National Geographic magazine. Polar bears, rainforests, pollution, that kind of thing. Or as a prominent radio presenter later told me: 'You go to these amazing places and tell us they're b*****d.'

There are certainly times when it is difficult to restrain one's emotions. Times, when even I, committed to balanced, dispassionate reporting, am struck by the enormity of a story.

That is what happened when cameraman Rob Magee and I visited Midway, a speck of coral 2,000 miles from the nearest continent, a dot beside the International Date Line. The scene of a famous naval battle during the Second World War, Midway is now run by the US Fish and Wildlife Service, but during the Cold War the US Navy operated here. It is still possible to imagine thousands of servicemen lined up in the vast hangar of the dimly lit airport. Birds, war, darkness. Alfred Hitchcock would have loved it.

Of the three, it is the birds that dominate. We see adolescent albatrosses - splendidly white - engaged in elaborate and noisy flirting. On the rubbish-strewn beach, I start to collect plastic lighters. After a short stretch, I stop to count: I've gathered 62. If I had brought a sack, I could have filled it in under an hour. There must be thousands. I turn to Matt Brown, a genial figure from the Fish and Wildlife Service, who simply shrugs. And at the top of the beach, he shows me something more shocking. An albatross is lying on its back, dead, its wings splayed. With a white belly, it's one of the



adolescents. Fully grown, its wingspan would have reached a magnificent 6ft, and it would have been one of the greatest spectacles soaring above the ocean. But this one never made it.

Matt explains that the parents, constantly trying to feed their young, often mistake rubbish for food. To their eyes, the lighters look very similar to the albatrosses' staple food - squid. Matt uses his penknife to prise open its belly. Inside the cavity there's a yellow lighter, an orange toothbrush and a fragment of red plastic. A snapshot of everyday modern life turned deadly.

Matt says the chick was fed the plastic objects because the parents assumed they were



food. The plastic took up space in its stomach, leaving less room for real food just when it most needed to grow. Gradually the bird became malnourished. Eventually, a failure to thrive became an inability to survive. How many albatrosses, I ask Matt, will have eaten plastic?

'Oh, every one of them,' he says. 'The ones that make it are the ones that don't eat too much.'

How many die of it? 'Maybe hundreds every year,' he says.

Midway, seemingly isolated, in fact is in the path of a great oceanic flow of rubbish. The island lies in one of the world's largest currents known as the North Pacific Gyre. Acting like a whirlpool, it sweeps down from Alaska, past the urban sprawl of California, right across towards the cities of Japan, up past the industries of coastal China and round to Alaska again. Rubbish dumped in rivers or drains, caught in floods and winds or thrown from cars and ships finds its way into the ocean and what's now known as the Great Garbage Patch. Some estimates say the patch covers an area the size of Texas.

As an experiment, we ask a dozen volunteers to collect as much rubbish as they can from the beach in 30 minutes. When the time is up, there's a heap the size of a car. Down at the bottom is a toy robot, about 2in tall, wearing futuristic armour and a Roman helmet. As I write my blog that evening, I ask producer Mark Georgiou to post a picture of the toy and ask readers if they recognise it.

Within hours, the story of Midway and its plastic bombardment catches the public's imagination. Many readers are moved to volunteer to help clean the island. Others suggest schemes for using trawlers to 'fish' the rubbish from the ocean. And the toy? It's Gigantor, says one contributor, a robot from a cartoon popular in the Sixties. No, says another, it's the Iron Giant.

What no one can explain is its journey. Did a child let it slip from a cruise ship? Was it a free gift with a fast-food meal taken on a boat before being tossed overboard? Or, more likely, did it end up in some city's waste being shipped out to sea and dumped? How long was it afloat? Given its size, it was most likely plucked from the waves by an albatross, swallowed, and carried back to Midway where it was regurgitated into the beak of a hungry chick.

Later someone has spotted an albatross chick in trouble: there's a bright green plastic hook jutting from the side of its beak and the bird apparently can't get it out. Wildlife specialist John Klavitter asks me to hold the bird still. With one hand he steadies its head and with the

other he gently grips the hook and pulls. Eventually the hook is out and with it, dangling from its end, is a small piece of plastic netting - the kind of thing used in supermarkets to hold a few tangerines. I ask John what difference the net and its hook made to the chick. 'They weren't killing it quickly,' he says. 'But they were probably getting in the way of proper feeding.'

What does that mean? **'That the chick was starving slowly to death.'**

A flimsy piece of net attached to a plastic hook, designed to be used just once, serves its purpose and is then thrown away. But surely something is going badly wrong if that perfectly



ordinary sequence of events nearly kills a rare bird?

It dawns on me that it's the language that's misleading, the phrase 'throwing away' doesn't convey what's involved. The word 'away' implies that where the rubbish is going is some abstract space of no consequence when in fact it has to end up somewhere. Like Midway.

I'm struck by how short-sighted we're being. Not through maliciousness, but

through ignorance of the consequences: that the casual act of dropping something into a bin can lead to a needless death on a remote shore and spoil an entire ocean.

I've always worked hard to remain detached from stories. I have been shocked before, but usually by some traumatic event or senseless cruelty. But here I am moved for the first time by a process, the needless destruction of the environment.

The thought of the lighters circulating in their millions around the Pacific leaves me stunned at the stupidity of a society in which so much is used so briefly and then junked so harmfully. Matt says this problem will last centuries, if not millennia. And we keep adding to it every day. Richard Thompson, a researcher at the University of Plymouth, has collected sand samples at several British beaches. They contain fragments of seaweed, leaves and wood, but about a quarter of each sample is made up of tiny particles of plastic. Without anyone realising, beaches have become partly artificial.

The largest of the particles are known as 'mermaid's tears', pieces of plastic the size of a grain of rice. The grains are shipped around the world and occasionally spill out at ports or during the journey. Particles of this kind have been found on the shores of every continent including Antarctica. Like the toy robot and the lighters on Midway, material gets caught in the currents and can travel globally.

But the mermaid's tears are still large enough to be visible to the naked eye. What concerns scientists like Thompson is the plastic that's even smaller - the result of bags, bottles and nets gradually breaking down into tinier fragments. His studies have shown how the ocean's smallest creatures also mistake plastic for food. Sandhoppers - crustaceans the size of fleas - have been dissected and found to have it in their bellies. This way, plastic is entering the lowest elements of the food chain.

That would be bad enough but each particle of plastic may be toxic too. Because plastic is produced from oil, it will bond with other products derived from oil - including any contaminants, such as the insecticide DDT - adrift in the ocean. The effect is that any piece of plastic, particularly the billions of microscopic fragments, will attract toxins - like magnets luring iron filings. If they are swallowed, the chances are that once in the guts of marine organisms the toxins will be released. And if those creatures are eaten by something bigger,

the toxins will be passed on. Scientists call this 'bioaccumulation', contaminants becoming more concentrated as they pass up the food chain.

What's conjured up is a nightmare image of an infinite number of plastic fragments drifting beyond our control, gathering the worst poisons, and gradually infecting everything that lives in the ocean.

On a dune busy with albatrosses, we set up for a series of live broadcasts. The response to my report is enormous. The birds, the plastic, the poisons, the helpless island all combine to trigger reactions at once fascinated and appalled. Our journey home takes us through Honolulu, where we spend the night in a hotel. At the breakfast buffet table are bowls, plates, cups and cutlery made from plastic. So too are the little containers of food. I eat and tidy up. Near the door, are some huge bins. I slide in the items that I used for a few brief minutes: the cup, bowl, plate, knife, fork, spoon, milk container, jam pot and butter packet, plus a mass of wrapping. I take my time over the process, checking exactly what I'm getting rid of, but I sense a restlessness behind me - people impatiently waiting with even bigger loads.

I wonder how we've got into a state where it's acceptable to use so many things just once and then 'throw them away'.

After the shock of Midway's plastic invasion and the drama of broadcasting live from somewhere so remote, I've woken this morning feeling stale, even a bit low. I watch a waiter manhandling the rubbish sack through the dining hall, past the line of people waiting to load up at the all-plastic buffet. I realise I'm experiencing a novel emotion in my career as a journalist, a feeling that catches me by surprise - anger.