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Plastics

38 million pieces of plastic waste found on uninhabited South Pacific island

Henderson Island, part of the Pitcairn group, is covered by 18 tonnes of plastic – the highest density of anthropogenic debris recorded anywhere in the world

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38m pieces of plastic found on uninhabited Henderson Island

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One of the world's most remote places, an uninhabited coral atoll, is also one of its most polluted.

Henderson Island, a tiny landmass in the eastern South Pacific, has been found by marine scientists to have the highest density of anthropogenic debris recorded anywhere in the world, with 99.8% of the pollution plastic.

The nearly 18 tonnes of plastic piling up on an island that is otherwise mostly untouched by humans have been pointed to as evidence of the catastrophic, "grotesque" extent of marine plastic pollution.


One of many hundreds of crabs that now make their homes out of plastic debris washed up on Henderson Island in the Pitcairn island group. This particular item is an Avon cosmetics jar. Photograph: Jennifer Lavers

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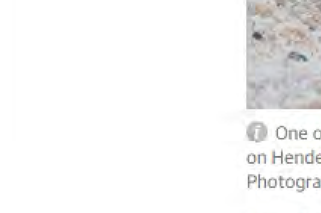

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38 million pieces of plastic waste found on uninhabited South Pacific island

Nearly 38m pieces of plastic were estimated to be on Henderson by researchers from the University of Tasmania and the UK's Royal Society for the Protection of Birds, weighing a combined 17.6 tonnes.

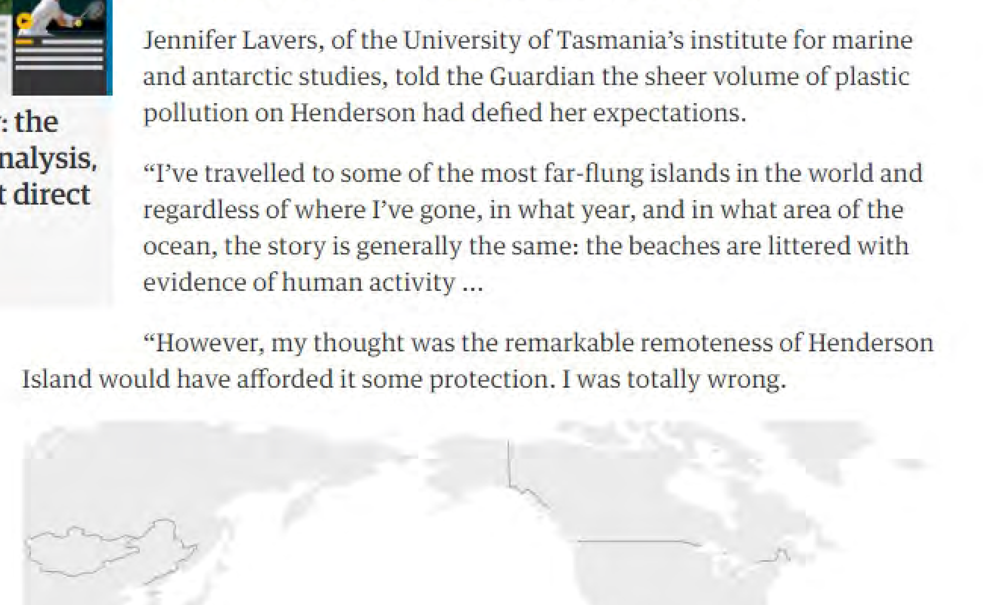

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The majority of the debris - approximately 68% - was not even visible, with as many as 4,500 items per square metre buried to a depth of 10cm. About 13,000 new items were washing up daily.

Jennifer Lavers, of the University of Tasmania's institute for marine and antarctic studies, told the Guardian the sheer volume of plastic pollution on Henderson had defied her expectations.

"I've travelled to some of the most far-flung islands in the world and regardless of where I've gone, in what year, and in what area of the ocean, the story is generally the same: the beaches are littered with evidence of human activity ...

"However, my thought was the remarkable remoteness of Henderson Island would have afforded it some protection. I was totally wrong.



Guardian graphic

"The quantity left me speechless and that's why I went to such pains to document it in such detail."

Lavers found hundreds of crabs living in rubbish such as bottle caps and cosmetics jars, and has been told of one living inside a doll's head.

"From the looks on people's faces, it was quite grotesque," she said. "That was how I felt about all these crabs - we are not providing them a home, this is not a benefit to them.

"This plastic is old, it's brittle, it's sharp, it's toxic. It was really quite tragic seeing these gorgeous crabs scuttling about, living in our waste."

The largest of the four islands of the Pitcairn Island group, Henderson Island is a Unesco World Heritage Listed site and one of the few atolls in the world whose ecology has been practically untouched by humans.

The island exhibits remarkable biological diversity given it covers only 3,700 hectares, with 10 endemic species of plant and four land bird species. Its isolation had, until recently, afforded it protection from most human activities.

Lavers said her findings had proved to her nowhere was safe from plastic pollution. "All corners of the globe are already being impacted."

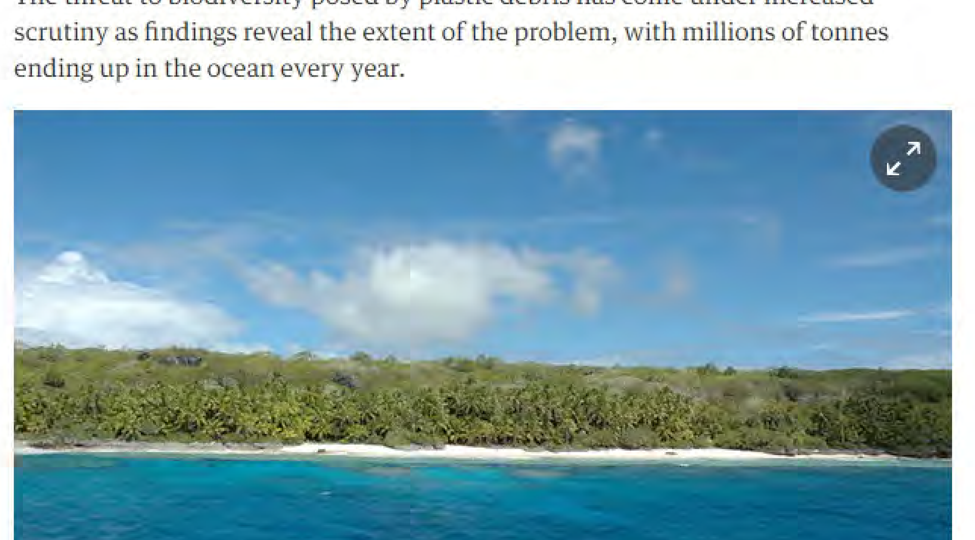
Like seabirds and turtles, remote islands serve as sentinels for the health of the wider marine ecosystem, "acting like a sieve or a trap, filtering out the ocean", she said.

The state of Henderson - "the most polluted, most remote island in the whole world" - was indicative of the extent of the problem, and the "absolutely mind-boggling" rate at which plastic was being produced globally.

The 17.6 tonnes of plastic on Henderson accounted for only 1.98 seconds' worth of annual production, found the paper - co-written by Lavers with Alexander Bond - published in Proceedings of the National Academy of Sciences on Monday.

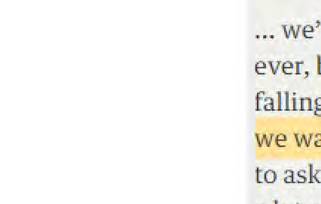
"Across the board, no country got a free pass on this - we found bottles from Germany, containers from Canada, I think it was a fishing crate from New Zealand. What that says is we all have a responsibility in this, and we have to sit up and pay attention to that."

The threat to biodiversity posed by plastic debris has come under increased scrutiny as findings reveal the extent of the problem, with millions of tonnes ending up in the ocean every year.


North West beach on Henderson Island looking pristine in a Unesco image, but the remote atoll's beaches are littered with tonnes of plastic. Photograph: Ron Van Oers/Unesco

In February, scientists reported "extraordinary" levels of toxic pollution in the Mariana trench, with plastic waste facilitating the spread of industrial chemicals to one of the most remote and inaccessible places on the planet.

At the world oceans summit in early March, Indonesia pledged to put up to $1bn a year towards reducing plastic and other waste products polluting its waters, setting a goal of a 70% reduction in marine waste within eight years.


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Laver said individuals and governments had a part to play in reducing the amount of plastic polluting the world's oceans, but the key was urgency.

"For me, marine plastic pollution is the new climate change, but I would like for us to not make the same mistakes. We've been arguing about climate change, and whether it exists and what is changing, for the better part of 40 years ...

"Let's not wait for more science. Let's not debate it. The rate of plastic in our oceans is absolutely phenomenal, and we need to do something now."

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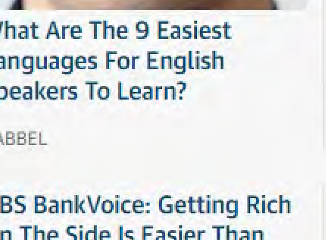
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