

# Plastic affects two-thirds of coastal waters, finds survey

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NEWS REPORTER

SOME of Scotland's most remote and unspoilt waters contain tiny plastic particles that threaten seabirds and other sealife, a major survey has revealed.

New data shows two out of three samples of water extracted from beaches contain traces of plastic, prompting calls for the Scottish Government to go further than their cotton bud ban.

Greenpeace said the problem is not as bad as some other regions of the world but criticised a lack of planning to address the issue.

Scientists collected samples in Scottish coastal waters last year, with a focus on the Hebrides in areas known to be important feeding grounds for basking sharks and seabirds such as gannets, puffins, razorbills and shearwaters.

A total of 49 samples were taken from waters around islands including Rum, Mull and Tiree as well as Loch Alsh, Loch Linnie, Loch Ness and the Firth of Forth.

They were then analysed at Greenpeace's laboratory in the University of Exeter, where

it was found 31 samples contained microplastics.

Greenpeace said the Beluga ship expedition gathered more data on plastic pollution in Scottish waters than any previously published survey.

Microplastics can carry a range of chemical additives and contaminants because of their synthetic nature and ability to absorb chemicals from seawater on to their surfaces.

Chemicals found in the samples include those used as additives in plastics like phthalate esters, heavy metals and flame retardants – some of which have been classified as “toxic to reproduction” or are suspected to have hormone disrupting properties.

The charity's oceans campaigner Tisha Brown said: “Although microplastics were found in two out of three samples, this isn't all bad news.

“The concentrations are lower than in many other regions of the world's oceans and hopefully Scottish marine life is at a proportionately lower risk.”

“However, the results varied significantly in unpredictable ways and so we would need longer-term testing to be confident of

average concentrations. The key finding here is that microplastics are present in some of Scotland's most remote and unspoilt waters.

“Threatened seabirds and other wildlife are already exposed to them, along with the fish stocks we eat, and there is currently no coherent process or even plan to stop this problem from getting worse.”

In January, the Scottish Government announced the sale and manufacture of plastic-stemmed cotton buds would be

banned, following concerns revealed by The Herald, about the number being washed up on beaches after being flushed down toilets.

But Greenpeace UK said the move “is a step forward but quite a small one” as cotton buds make up only around one per cent of what was found in the seas.

Europeans currently consume up to 11,000 pieces of plastic in their food each year. Unpublished studies say fewer than 60 of these are likely to be absorbed – but they will accumulate in the body over time.

Last note from print NME after 66 years

NME, one of the world's most famous music magazines, is ceasing its weekly print edition.

Publishers said that the magazine would release its final free print edition on Friday, citing rising production costs and a “tough” advertising market.

Owners Time Inc said it would be “focusing investment on further expanding NME's digital audience”.

The magazine, which was launched in 1952, went free in September 2015.

Paul Cheal, Time Inc UK group managing director, Music, said: “NME is one of the most iconic brands in British media and our move to free print has helped to propel the brand to its biggest ever audience.”

“The print re-invention has helped us to attract a range of cover stars that the previous paid-for magazine could only have dreamed of.

“At the same time, we have also faced increasing production costs and a very tough print advertising market.”

“Unfortunately, we have now reached a point where the free weekly magazine is no longer financially viable. It is in the digital space where effort and investment will focus to secure a strong future for this famous brand.”

Publishers said NME would continue releasing special issues in print.

The development comes at a tumultuous time in the magazine world, with Glamour announcing it would be printing a paper magazine only twice a year, and with its online site focusing on beauty.

NME said new services, as part of its digital extension, would include new music channels and a weekly franchise, The Big Read, online.



This puffin, on the Shiant Isles, in the Outer Hebrides, has picked up some plastic.

Picture: Will Rose/Greenpeace

## Muir ‘would have approved’ of tea test brewing up climate evidence

JULIA HORTON

SCOTS naturalist John Muir famously took little more than tea leaves with him on his wilderness hikes in which he pioneered outdoor experiments leading him to warn that the world was getting warmer.

So the renowned 19th century conservationist would probably

have approved of an unusual study at a nature reserve named after him where hundreds of tea bags have been buried in a bid to combat climate change.

The tea bags, more commonly used for luxury brews at top restaurants such as the Michelin-starred Peat Inn, were buried in salt marshes at John Muir Country Park near Dunbar for a St Andrews University

study to see how long they take to decompose.

Early results have shown the Tea Lovers' Company tea leaves lasted significantly longer in muddier places compared to more sandy locations.

Experts said the findings showed that the more muddy parts of the marshland were better at storing the carbon found in the tea leaves,

suggesting they were also a better store of carbon from similar naturally occurring organic plant material.

As a result muddy salt marshes, such as tropical rainforests, arguably needed greater protection under government environmental policies to take advantage of the natural “eco-service” they provide in storing so-called blue

carbon (from oceans and coastal areas) to help reduce global warming.

AnnaClaire Marley, who is conducting the study, said: “I felt a bit bad burying these really nice tea bags but the results have been good so far. After three months I found that in general the tea bags had not decomposed as much in the muddier, more classic salt

marsh areas. There has not been much research on blue carbon from coastal areas like salt marshes.”

Will Collin, trustee at the John Muir Birthplace at Dunbar, said: “John Muir travelled light – usually a small bag of tea leaves, some flour or dried bread and not much else. As a scientist I am sure he would approve of this tea study.”

# The Herald

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