

Birds digest plastic faster than believed

April 18 2011, by Roelof Kleis

Seabirds appear to process plastic faster than scientists hitherto believed.

This is bad news, as it means they ingest large amounts of [toxic substances](#). The birds also transport plastic around the world. These conclusions have emerged from the work of IMARES, part of Wageningen UR, researcher Jan Andries van Franeker, who surprised delegates at a conference on [marine debris](#) in Hawaii with his findings last week. 'Up to now the attitude has always been: it will take years before that plastic passes through the birds' stomachs. But that turns out not to be true.'

A fulmar breaks down at least three quarters of the plastic in its stomach every month, says Van Franeker. He deduced this from his own research in Antarctica, where fulmars arrive at the end of the winter with polluted stomachs. Antarctica is clean, so they do not ingest any more rubbish there. And that makes it possible to establish how quickly the plastic is broken down. Other researchers have found comparable breakdown rates in the North Pole, says Van Franeker. Birds break down plastic in their stomachs into smaller pieces, which they then excrete. But the toxic substances remain behind in their intestines. So a fast processing rate causes a higher intake of toxins for the birds, according to Van Franeker.

A side-effect of this digestion rate is that birds contribute to the spreading of plastic waste. Van Franeker has calculated the implications for the two million fulmars on the North Sea. In the average fulmar's stomach there are 35 pieces of plastic weighing a total of 0.31 grams. According to Van Franeker, the birds process six tons of plastic per year

between them. What that means for the global scale is not known. There are too many [bird species](#) on which there is no data. 'But it could be a considerable amount, depending where you are.' To make matters worse, the processed [plastic](#) is brought to places that were previously clean. Van Franeker: 'If you are talking about [birds](#) that fly to Antarctica after wintering elsewhere, they are bringing in a few tons of micro-plastic that wasn't there before.'

Provided by Wageningen University

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