

# Dining out in an ocean of plastic: How foraging albatrosses put plastic on the menu (w/ Video)

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The North Pacific Ocean is now commonly referred to as the world's largest garbage dump with an area the size of the continental United States covered in plastic debris. The highly mobile Laysan albatross (*Phoebastria immutabilis*), which forages throughout the North Pacific, is quickly becoming the poster child for the effects of plastic ingestion on marine animals due to their tendency to ingest large amounts of plastic.

Reporting in the open-access journal *PLoS ONE*, Dr. Lindsay Young of the University of Hawaii and her colleagues examined whether Laysan albatrosses nesting on Kure Atoll and Oahu, Hawaii, 2,150 km away, ingested different amounts of plastic by putting miniaturized tracking devices on [birds](#) to follow them at sea and examining their regurgitated stomach contents. Surprisingly, birds from Kure Atoll ingested almost ten times the amount of plastic compared to birds from Oahu.

Data from the tracking devices revealed that the birds were distributed over separate areas of the North Pacific during the breeding season and that birds from Kure overlapped considerably with the area of the 'western garbage patch' off of Asia which resulted in their greatly increased plastic ingestion.

"We were very surprised with the results," indicates lead author Lindsay Young. "We suspected that there may be some differences in the amount

of plastic that was ingested, but to discover that birds on Kure Atoll ingested ten times the amount of plastic compared to birds on Oahu was shocking. Particularly since the colony on Oahu is less than an hour outside of urban Honolulu, and is much closer to the garbage patch in the Eastern Pacific between Hawaii and California that has received so much attention."

Young indicates that these results were further supported when the plastic items were examined - virtually all of the plastic pieces recovered from birds on Kure Atoll had Asian characters on them indicating their likely origin, while none of the plastic pieces found in birds on Oahu had similar writing.

While sorting through the polluted stomach contents of albatross chicks was not a particularly pleasant task, the authors found humor in the situation. "We were sorting through these boluses right after Christmas, and there were so many small plastic toys in the birds from Kure Atoll that we joked that we could have assembled a complete nativity scene with them," says Young.

The most common identifiable items they found were paraphernalia from the fishing industry such as line, light sticks, oyster spacers, and lighters. The strangest item that they found? A sealed jar of face lotion with fresh smelling lotion still intact inside the jar. Unfortunately, while the albatross examined in this study were able to purge themselves of the plastic by regurgitating it, thousands of albatross die each year as a result of ingesting [plastic debris](#). Plastic ingestion leads to blockage of the digestive tract, reduced food consumption, satiation of hunger, and potential exposure to toxic compounds to name but a few of its detrimental effects.

This study highlights that garbage generated by human activities on land clearly impacts ocean ecosystems thousands of miles away. And

unfortunately there is no easy solution- each person must examine their footprint on the earth and how the lighter or bottle cap they toss into the trash can ultimately end up in the [stomach](#) of an albatross, thousands of miles away. Until we learn to do more with less, albatross and other marine animals will continue to dine on our garbage with as of yet unknown consequences.

More information: Young LC, Vanderlip C, Duffy DC, Afanasyev V, Shaffer SA (2009) Bringing Home the Trash: Do Colony-Based Differences in Foraging Distribution Lead to Increased [Plastic](#) Ingestion in Laysan Albatrosses? [PLoS ONE](#) 4(10): e7623.  
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