



Study finds plastic 'diet' in leatherback turtles

Necropsy reports show a third of specimens had it in their digestive system

By Emily Sohn



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Leatherback turtles are ancient creatures with a modern problem: Plastic.

A new study looked at necropsy reports of more than 400 **leatherbacks that have died** since 1885 and found plastic in the digestive systems of more than a third of the animals. Besides plastic bags, the turtles had swallowed fishing lines, balloon fragments, spoons, candy wrappers and more.

Plastic was probably not the cause of death in most cases. Nevertheless, the study is an important wake-up call for a growing garbage problem.

Slide show



"Eating something that is plastic can't be good for you, whether it leads to death or not," said Mike James, a marine biologist at Dalhousie University in Halifax, Nova Scotia. "It's not what they should be eating. And it's kind of scary that it is showing up in their diet to the extent that it is."

Leatherback **turtles** are critically endangered and highly charismatic creatures. They are big, weighing 1,000 pounds or more, with shells that can measure more than 6 feet across. These peaceful creatures have had the same basic body

plan for 150 million years.

Leatherbacks are also popular for what they eat: namely, large quantities of **jellyfish**. The problem is that plastic bags look a lot like jellyfish, and plastic often ends up in the oceans, piling up in areas where currents -- **and turtles - - converge**. That led James to wonder how much often the turtles were swallowing plastic in their hunt for yummy jellyfish.

Collecting the data was a painstaking process. James and colleagues spent two years searching far and wide for turtle necropsy reports. They scanned the literature, and they asked people to dig up old field-notebooks. For every report found, they had to make sure that a complete necropsy had been performed and that the entire GI tract had been opened.

The researchers ended up with a sample size of 408 turtles, stranded at some point during the last 125 years. Of those, 138 -- or 34 percent -- contained plastic. Alongside the rise in plastic production, there has been a sharp rise in plastic-containing turtles since the 1950s.

That finding isn't surprising, given the leatherback's jellyfish-based diet, said Christopher Sasso, a research fisheries biologist with the National Marine Fisheries Service in Miami.

But the numbers are alarming. Plastic can block a turtle's gut, causing bloating, interfering with digestion, and leading to a slow, painful death. "I can't imagine it's very comfortable," he said. "Their guts weren't designed to digest plastic."

There are vast fields of trash floating in the world's oceans, Sasso added. And leatherback turtles travel thousands of miles each year, giving them even more opportunities to come in contact with it.

"This is an animal that has survived many extinction events," James said, "And now it's got all these anthropogenic hazards to face."

That's where people come in. Simple choices -- like putting balloons and picnic supplies in the trash and using canvas instead of plastic grocery bags -- can help leatherbacks and other marine creatures survive long into the future.

"Of all the problems the environment faces, this one is not impossible to address," James said. "We don't need to have everything packaged in plastic. There are alternatives."

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