

World's biggest creature tracked by its song

March 27 2013, by Madeleine Coorey



A blue whale is spotted off Sri Lanka on January 21, 2012. An Australian-led group of scientists has for the first time tracked down and tagged Antarctic blue whales by using acoustic technology to follow its songs, the government said Wednesday.

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The blue whale, the largest animal on the planet, is rarely spotted in the Southern Ocean but a group of intrepid researchers were able to locate and tag some of the mammals after picking up on their deep and complex vocals.

Researcher Virginia Andrews-Goff said it was the first time acoustics have been used to lead researchers to the whales in real time, with those monitoring the whale noises working around the clock to pinpoint them.

"The acoustics led us to the whales," she told AFP.

"They are quite, almost alien-like, deep resonating sounds. They are quite intense. Very interesting to listen to."

Environment Minister Tony Burke said the researchers, who spent seven weeks working from small boats in freezing Antarctic conditions, were captivated by the remarkable behaviour of the whales they saw.



A blue whale is spotted in the waters off the southern Sri Lankan town of Mirissa on January 21, 2012. The blue whale, the largest animal on the planet, is rarely spotted in the Southern Ocean but a group of intrepid researchers were able to locate and tag some of the mammals after picking up on their deep and complex vocals.

"The Antarctic blue whale can grow to over 30 metres in length and weigh up to 180 tonnes, its tongue alone is heavier than an elephant and its heart is as big as a small car," Burke said.

"Even the largest dinosaur was smaller than the blue whale."

Andrews-Goff said the scientists were often out in boats only six metres in length, sitting alongside the 30-metre giants.

"I felt like an ant next to one of these massive whales. They are huge," she said.

The scientists collected 23 biopsy samples and attached satellite tags to two of the whales, giving them never-before obtained data on the animals' movements during their summer feeding season and their foraging behaviour.

"This method of studying Antarctic blue whales has been so successful it will now become the blueprint for other whale researchers across the world," Andrews-Goff predicted.

She said while one tag stopped working after 17 days, the second was still working after two weeks, although erratically.

"We know very little about Antarctic blue whales' movement, we don't really know migration patterns, we don't really know if some animals migrate and some animals don't," she said.

"We can assume that we know where the whales feed but by using these satellite tags we can actually see where they are spending a lot of their time and if that's associated with environmental features like the sea ice edge.

"So the information that we can get from these tags is really useful."



A blue whale's fluke is photographed in the waters off the southern Sri Lankan town of Mirissa on January 21, 2012. The blue whale can grow to over 30 metres in length and weigh up to 180 tonnes, its tongue alone is heavier than an elephant and its heart is as big as a small car

The inaugural Southern Ocean trip of the Antarctic Blue Whale Project involved deploying acoustic buoys west of the Ross Sea to pick up blue whale songs, which can be detected from hundreds of kilometres (miles) away.

They recorded 626 hours of songs, with 26,545 calls from Antarctic blue whales analysed in real time, said lead acoustician Brian Miller.

"The researchers were then able to triangulate the position of the whales from their vocalisations and direct the ship to the target area," he added.

Burke said the study proved it was not necessary to kill whales to conduct scientific research, a reference to Japan's annual whale hunt in the Antarctic, which is conducted in the name of scientific research.

"The Antarctic blue whale barely escaped extinction during the industrial whaling era in the 1900s when around 340,000 whales were slaughtered," Burke said in a statement.

"This research reinforces Australia's commitment to non-lethal research of whales."

Scientists on the voyage made 720 whale sightings, including of humpback, minke, fin and bottle-nosed species.

The whale project aims to estimate the abundance, distribution and behaviour of the species. Andrews-Goff said estimates suggested there were only a "couple of thousands" left.

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