

A whale with a distinctly human-like voice

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A beluga whale is seen in an aquarium. US marine biologists puzzled by human-like sounds coming from the whale and dolphin tank of an aquarium concluded they were actually coming from a whale.

For the first time, researchers have been able to show by acoustic analysis that whales—or at least one very special white whale—can imitate the voices of humans. That's a surprise, because whales typically produce sounds in a manner that is wholly different from humans, say researchers who report their findings in the October 23 issue of *Current Biology*.

"Our observations suggest that the whale had to modify its vocal mechanics in order to make the speech-like sounds," said Sam Ridgway of the National [Marine Mammal](#) Foundation. "Such obvious effort suggests motivation for contact."

It all started in 1984 when Ridgway and others began to notice some unusual sounds in the vicinity of the whale and dolphin enclosure. As they describe it, it sounded as though two people were conversing in the distance, just out of range of their understanding.

Those unusually familiar sounds were traced back to one white whale in particular only some time later when a diver surfaced from the whale enclosure to ask his colleagues an odd question: "Who told me to get out?"

They deduced that those utterances came from a most surprising source: a white whale by the name of NOC. That whale had lived among dolphins and other white whales and had often been in the presence of humans.

In fact, there had been other anecdotal reports of whales sounding like humans before, but in this case Ridgway's team wanted to capture some real evidence. They recorded the whale's sounds to reveal a rhythm similar to [human speech](#) and fundamental frequencies several octaves lower than typical whale sounds, much closer to that of the [human voice](#).

"Whale voice prints were similar to human voice and unlike the whale's usual sounds," Ridgway said. "The sounds we heard were clearly an example of vocal learning by the white whale."

That's all the more remarkable because [whales](#) make sounds via their nasal tract, not in the [larynx](#) as humans do. To make those human-like sounds, NOC had to vary the pressure in his nasal tract while making other muscular adjustments and inflating the vestibular sac in his blowhole, the researchers found. In other words, it wasn't easy.

Sadly, after 30 years at the National Marine Mammal Foundation, NOC passed away five years ago. But the sound of his voice lives on.

More information: Ridgeway et al.: "Spontaneous human speech mimicry by a cetacean" *Current Biology* [www.cell.com/current-biology/abstract/S0960-9822\(12\)01009-3](http://www.cell.com/current-biology/abstract/S0960-9822(12)01009-3)

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