



News

Do humpbacks sing for GPS, not love?

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Cosmos Online

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A serenade or not?: The new theory proposes that the whales sing to better pinpoint the location of other whales.

Image: NOAA

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It's not even science - it should be banned	15%
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NEW YORK: The haunting songs male humpback whales sing while criss-crossing the world's oceans might not be intended to woo females, but to track the locations of their fellow leviathans.

"The traditional explanation for why whales do this is that male whales are singing to seduce female whales, and that females get really turned on by songs that are currently in style," said Eduardo Mercado, a neuroscientist at the University of Buffalo in New York state, USA.

Buddy tracker

But Mercado thinks there are several problems with this explanation. "If songs change every year, then how do females decide which songs are the best?" he said. And "if males hear several different songs, how do they judge whether the songs they hear are better or worse than their own?"

Mercado's alternative theory, which he presented at the annual Acoustical Society of America meeting (ASA) in New Orleans last week, is that the whales sing to better pinpoint the location of other whales.

"Simply knowing that there are three whales swimming in the ocean is not very useful if you do not know where the whales are," Mercado said. "Singers have to figure out where other whales are by listening."

But this can be challenging as sounds get distorted as they propagate through water. Mercado speculates that whales sing in an attempt to recreate the vocalisations of their kin as they originally sounded.

"By imitating the sounds of other singers, a whale can create a copy of what the sounds he hears are like at the source," he said. "The singer can then potentially compare incoming sounds to memories of undistorted copies of those sounds, and use the differences to judge the distance the sound has travelled."

Chinese whispers

According to this view, differences in songs result not from male humpbacks trying to out-serenade one another, but imperfect mimicry. "It's sort of like the telephone game where a message is passed from one person to another by whispering," Mercado said. "Errors gradually accumulate until the final message is different from the original one."

Mercado thinks his hypothesis could be tested by playing novel songs to whales and seeing which parts they learn. He predicts that only certain song segments containing spatial information will get repeated.

Peter Tyack, a marine biologist at the Woods Hole Oceanographic Institution in Massachusetts, is sceptical, however. He points out that even if Mercado's idea is correct, it doesn't rule out the importance of the whale songs for reproduction.

"The hypothesis is about details of a signal that help animals to achieve greater precision in localization," Tyack commented. "It is not about social functions [or] why animals need to locate one another."

More information

[Listen to the songs of different whales - Wikipedia](#)

[Humpback whale song - PBS](#)

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