

"Long before it's in the papers"

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Dolphins found to remember their friends at least 20 years

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Courtesy of The Royal Society
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Dolphins can recognize their old friends' whistles after being separated for more than 20 years, the longest social memory ever recorded for a non-human species, according to a study.

The feat is another sign that dolphins have cognitive sophistication comparable to only a few other species, including humans, chimpanzees and elephants, biologists say.



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"This shows us an animal operating cognitively at a level that's very consistent with human social memory," said Jason Bruck of University of Chicago, author of the study published Aug. 7 in the journal *Proceedings of the Royal Society B*.

Bruck collected data from 53 different bottlenose dolphins at six facilities, including Brookfield Zoo near Chicago and Dolphin Quest in Bermuda. The sites were part of a breeding consortium that has rotated dolphins and kept records of which ones lived together.

Other recent studies have found that each dolphin develops a unique signature whistle that seems to function as a name. Researchers Vincent M. Janik and Stephanie L. King at the University of St. Andrews, U.K., reported earlier this year, in the same journal, that a wild bottlenose dolphin can learn and repeat signatures of its peers, and answer when another dolphin mimics its own.

Bruck played recordings of signature whistles to dolphins that had once lived with those that made the calls. The familiar calls often would perk up the dolphins and elicit an immediate response, he said. “They often quickly approach the speaker playing the recording,” Bruck said. “At times they will hover around, whistle at it, try to get it to whistle back.”

To check that the response was the result of recognition, Bruck also would play a test recording of an unfamiliar bottlenose of the same age and sex as the familiar animal. Dolphins responded significantly more to whistles from animals they once knew, even if they had not heard the calls in decades, the study found.

Just why these memories persist so long remains unclear. In the open ocean, dolphins may break apart from one group and join with other groups many times, Bruck said. Such relationships could have required a growth in memory, he added, but it’s also possible that memory is just one facet of the advanced mind that evolved in dolphins for other reasons.