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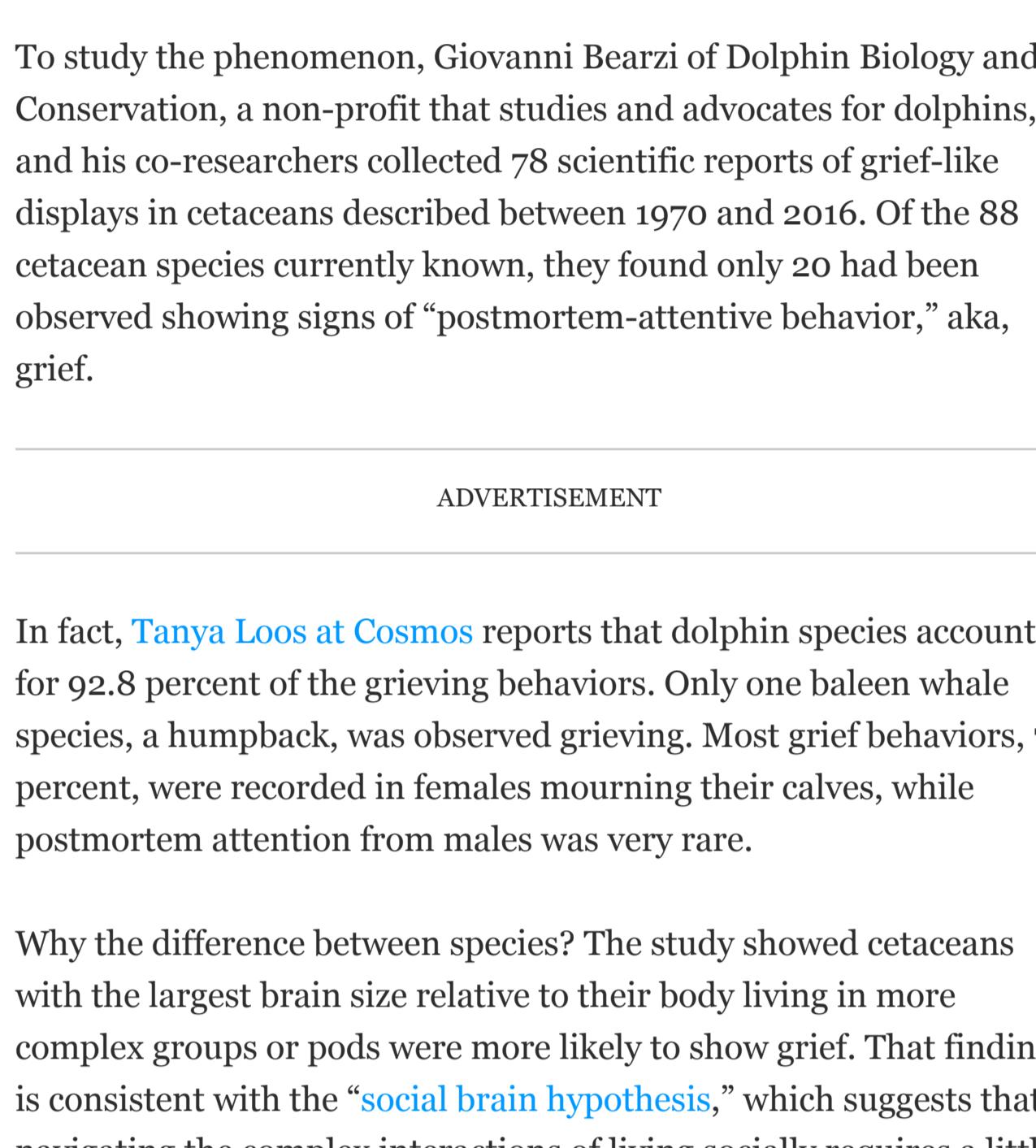
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Study Suggests Dolphins and Some Whales Grieve Their Dead

An analysis of 78 instances of cetaceans paying attention to their dead suggests grief may be part of being a highly social animal



This striped dolphin, photographed in the Gulf of Corinth, may be grieving a relative. A new study examines the evidence. (Silvia Bonizzoni/Dolphin Biology and Conservation)

By [Jason Daley](#)

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For years, there's been anecdotal evidence that whales and dolphins experience grief similar to humans. In 2010 in Washington State, for instance, people observed a killer whale pushing around and nuzzling her dead calf for six hours, unwilling to abandon the body. Humpback whales have been heard crying mournfully when one of their companions is beached, and captive dolphins have been observed lying on the bottom of the pool, seemingly wracked with depression, after the death of a companion. Now, reports Virginia Morell at *Science*, a new study tries to get a handle on this grief-like behavior to determine if cetaceans—dolphins and whales—really do experience the emotion.

To study the phenomenon, Giovanni Bearzi of Dolphin Biology and Conservation, a non-profit that studies and advocates for dolphins, and his co-researchers collected 78 scientific reports of grief-like displays in cetaceans described between 1970 and 2016. Of the 88 cetacean species currently known, they found only 20 had been observed showing signs of "postmortem-attentive behavior," aka, grief.

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In fact, Tanya Loos at *Cosmos* reports that dolphin species accounted for 92.8 percent of the grieving behaviors. Only one baleen whale species, a humpback, was observed grieving. Most grief behaviors, 75 percent, were recorded in females mourning their calves, while postmortem attention from males was very rare.

Why the difference between species? The study showed cetaceans with the largest brain size relative to their body living in more complex groups or pods were more likely to show grief. That finding is consistent with the "social brain hypothesis," which suggests that navigating the complex interactions of living socially requires a little more brain power. With that also comes more complex emotions, which includes feelings like grief. The study appears in the journal *Zoology*.

Morell reports that researchers have observed and filmed so many grief events in primates like chimpanzees and recorded stress hormone levels in grieving baboons that they can definitively say the animals are experiencing what we would call grief. But Bearzi is cautious not to attribute the emotion to dolphins and whales yet. That's because researchers simply do not have the number of sightings and data that primate researchers do. There may be other explanations for mothers attending their dead calves, like attempting to resuscitate them. However, getting more and better data will prove difficult. Most of these grief-like events are recorded during chance encounters. Bearzi says he hopes researchers who happen upon one of the events could drop a hydrophone to record the calls and might try to collect a sample of spray from the grieving mother's blowhole so stress hormones can be analyzed.

"Besides filming and observing, I didn't know what to do as a scientist," Bearzi says. "Maybe [additional] data will give us a better understanding about what is in their minds and if they feel grief. The bottom line now is: We do not know."

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However, some situations certainly look like grief. Maddalena Bearzi, Giovanni's sister, a dolphin researcher and founder of the Ocean Conservation Society based in California, wrote a blog post at *National Geographic* discussing an encounter with a grieving dolphin her brother and his crew experienced in the Gulf of Corinth in 2016.

During the event, caught on film, a living dolphin circles and prods a smaller dead female, while emitting clicks. The encounter convinced most of the researchers on board that the dolphin was showing a strong emotion.

"In examining our high-resolution photos, we noticed that in all our images, the living individual looks only at the dead one and never looks up. Dolphins lack muscles to control their facial expression, but the eyes often reveal their emotions," Giovanni tells his sister. "Close-ups of the eyes of the grieving individual convey a feeling of suffering, and while this interpretation may be seen as anthropomorphic, feelings of grieving are not uniquely human. Indeed, we share these feelings with a number of other species (elephants, among others, are well known for their grieving behavior)."

The Bearzi siblings aren't the only researchers who think dolphins likely grieve. A 2015 study led by Filipe Alves of the University of Porto in Portugal also showed that Atlantic spotted dolphins seemed to show grieving behaviors for several minutes or sometimes hours after the death of a calf. "Species that live in a matrilineal system, such as killer whales and elephants; species that live in pods of related individuals, such as pilot whales whose pods can comprise up to four generations of animals—when they spend a lifetime together, sometimes 60 years or more, yes, I believe they can grieve," says Alves.

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Jason Daley is a Madison, Wisconsin-based writer specializing in natural history, science, travel, and the environment. His work has appeared in *Discover*, *Popular Science*, *Outside*, *Men's Journal*, and other magazines.

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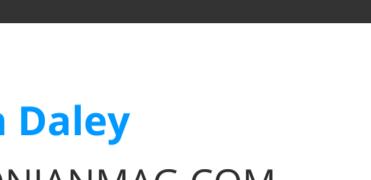
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