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# DOLPHIN VERSUS OCTOPUS. AND THE WINNER IS...

By Maddalena Bearzi



A California two-spot octopus latching on a bottlenose dolphin for dear life off Malibu, California. ©Maddalena Bearzi/Ocean Conservation Society, 2024

*Carl Safina is a fan of Maddalena  
Bearzi's writing and research. Here,*

*Maddalena contributes a guest blog  
about an amazing ocean encounter.*

Bottlenose dolphins meander along the Los Angeles shoreline in a leisurely mood. Groups slow down here and there to dive in search of prey. It's familiar behavior for those of us on the Ocean Conservation Society research team who have studied this species for almost three decades off the California coast.

This morning, the ocean is oddly flat and the dolphins are heading north, a stone's throw away from the busy Pacific Coast Highway and scores of multi-million dollar Malibu estates. Binoculars glued to her eyes, my assistant Kira follows their dorsal fins, attempting to get an accurate count while I endeavor to photo-identify the individuals with my camera from the

deck of our research boat. We have been following this group and collecting data for over an hour, and during this time, the total number of dolphins has changed twice. Like people shifting from one social cluster to another at a party, bottlenose dolphins regularly change group composition in their fluid fission-fusion societies.

Charlie, our captain, shifts the throttle to idle speed as the boat gently glides over the now-rising swell. The dolphins disappear under the surface likely in the pursuit of a seafloor buffet. As they resurface, I zoom in and take pictures in rapid-fire bursts hoping to get some suitable dorsal fin images.

“Chin up, seven o’clock!” Kira calls as I triple-click in the same direction.

It’s then that I see something strange on the head of a dolphin. At first, and from a distance, it looks like a sponge

balanced on the rostrum. But an enlarged image says otherwise: this is a California two-spot octopus, aka Bimac!

Bluish circles are visible on each side of the mollusk's head, akin to a pair of extra-large eyes that can easily trick a predator. No longer than a butter knife, its body lies just above the bottlenose's left eye - now completely shut, while the sucker-covered tentacles grip the rostrum and melon of the dolphin.

One species is large, with one heart and no arms; brain-wise second only to humans. The other is alien-looking, small, with three hearts and eight arms, each working independently and efficiently, almost as if these appendages had a brain of their own. Of its 500 million neurons, in fact, over two-thirds are jam-packed within an octopus' arms and body.

Off Los Angeles, I have watched California sea lions shake a halibut to

break it into smaller edible pieces.

Today, though, it could be my chance to see a bottlenose dolphin shaking and tossing a live octopus. After all, this is just one of their several cunning food-handling techniques; a good one for an animal without hands.



A California sea lion shaking a halibut off Los Angeles, California. ©Maddalena Bearzi/Ocean Conservation Society, 2023

Kate Sprogis, a behavioral ecologist at the Murdoch University Cetacean Research Unit, and her colleagues, for

the first time detailed this complex octopus handling behavior by Indo-Pacific bottlenose dolphins off southwest Australia back in 2017. In their paper, they explain how dolphins use proper chef techniques to prepare their meals. The first to go is the head. Next, the mollusk—held in the dolphin’s jaws—gets tenderized by being powerfully shaken and hit against the water’s surface. Disarming the tentacles here is key because they can still be “alive,” and potentially deadly, even after the head removal. Then, it’s time for the prey to be repeatedly tossed into the air. Some additional shaking and slamming against the water help break the prey into smaller snacks. A few minutes are enough, et voilà, dinner is ready.

But the high-protein meal doesn’t come risk-free and the processing part is a must to avoid trouble... In an attempt to save themselves, octopuses can kill a

dolphin by suffocation or asphyxiation  
using their arm to block the dolphin's  
airways as a defensive response.

It's a fight to the death, and this  
morning it's this little Bimac hanging  
on for dear life right before our eyes.

The score is hard to keep track of from  
the deck of our research boat...

*Dolphin 1 – Octopus 0:* the tip of one  
octopus arm is in the mammal's mouth;

*Octopus 1 – Dolphin 1:* the opposite  
arm is extended up, dangerously  
covering part of the blowhole and  
possibly being inserted into it....

Does it mean that this octopus “knows”  
that one of its wiggling tentacles is  
covering the blowhole of the dolphin  
while another one is getting chomped?  
Likely yes. It doesn't matter if octopuses  
are equipped with *just* “an elaborate  
brain and eight very clever  
appendages” as some scientists believe,

or eight actual mini-brains, as recently suggested by others. It wouldn't be surprising to learn that one of the climbing arms of this cephalopod is deliberately clogging the dolphin's "nose" in an attempt to survive: octopodes that developed such behavior in the course of millennia have been more likely to survive dolphin attacks, reproduce, and pass on their self-defense genes.

The dolphin and its companions dive for forty seconds. When they emerge, we only see the dorsal fins slicing the water's surface. Eight individuals have now resumed their northbound travel.

Of the octopus, there is no trace.

Maddalena Bearzi is President and co-founder of Ocean Conservation Society. She has a Ph.D. in Biology and a Postdoctorate from the University of

California, Los Angeles. Maddalena has been involved in studying the ecology of marine mammals with a strong conservation bias since 1990. Her research on dolphins, whales, and pinnipeds off Southern California represents one of the longest studies on these animals worldwide. She has published several scientific peer-reviewed papers, she is co-author of the book *Beautiful Minds: The Parallel Lives of Great Apes and Dolphins* (Harvard University Press, 2008) and author of *Dolphin Confidential: Confessions of a Field Biologist* (University of Chicago Press, 2012), as well as *Stranded: Finding Nature in Uncertain Times* (Heyday 2023). Her illustrated children's book *The Secret Life of a Sea Turtle* for Roaring Brook Press / MacMillan is forthcoming Spring 2025. Her scientific research and books have been covered, among others, by CNN, KPCC, The Los Angeles Times, the New

Scientist, American Scientist, and The Huffington Post. She has worked as a blogger for National Geographic, and she continues to write essays and op-eds on current environmental issues and wilderness for different media. See [Maddalena's Author and Photo-Journalist page](#) to learn more.



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