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Lunch-time: Dolphin vs. Octopus



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How to eat an octopus without using your hands



Bottlenose dolphin handling an octopus. Image: ©K. Sprogis & M. Franklin/Murdoch University

What do predators do when the prey is too big to be swallowed whole? It really depends on the size, texture and shape of the targeted victim but, generally speaking, it goes through some form of “processing” before being consumed.

Different animals around the world have found clever, interesting, and at times dangerous ways, of handling their game. In the oceans, leopard seals thrash seal pups and seabirds to break them down into smaller, more digestible chunks. Shaking and tossing a prey is a well-documented way that Australian fur seals deal with large fish and cephalopods, and killer whales can toss a sea lion or throw the entire body of a dusky dolphin into the air.

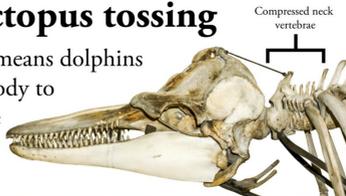
Another species that uses the “shake and toss” method is the bottlenose dolphin. In my [field research](#) on marine mammals off Southern California, I have occasionally seen both coastal and offshore bottlenose shaking large prey — usually fish but at times even octopuses — then repetitively tossing them high into the air.

I have always been fascinated by observing and reading about this unusual food handling technique adopted by these large-brained, complex animals. So, when I spotted a scientific paper by Kate Sprogis, a behavioral ecologist at the [Murdoch University Cetacean Research Unit](#) and her colleagues, describing in detail and for the first time the “shaking and tossing” behavior of live octopuses by a population of Indo-Pacific bottlenose dolphins, I was immediately captivated.

Just imagine catching and eating an octopus: not an easy task if you have no hands! And also a risky task considering that octopuses have been observed [latching](#) onto a dolphin’s side and back — dangerously close to the blowhole — attaching themselves to a dolphin’s belly (and its [genital slit!](#)), and even [suffocating](#) attackers with their long tentacles.

Anatomy of octopus tossing

A short, inflexible neck means dolphins must arch their whole body to toss octopuses out of the water while processing them for consumption



KR Sprogis, HC Raudino, DP Hocking, L Bejder (2017) Complex prey handling of octopus by bottlenose dolphins (*Tursiops aduncus*). *Marine Mammal Science*. DOI: 10.1111/mms.12405

Anatomy of octopus tossing. Image: ©K. Sprogis / Murdoch

Sprogis and her team have recorded the handling technique of octopuses by dolphins, mostly adult females, on 45 different occasions in the turbid, shallow waters off the coast of Bunbury, in southwest Australia. What these researchers discovered was a recipe not so different from that of a chef... First, the dolphin removes the octopus’ head; then, it’s time to tenderize its entire body by shaking it — also ensuring to “disarm” the suction cups with some additional tossing. The final step of the process is the breaking of the prey into smaller, more edible pieces by slamming it against the water multiple times. And *voilà*’, the recipe is done in just a few minutes and the octopus is ready for dinner!



A sequence of an octopus handling event by bottlenose dolphin off Bunbury, Western Australia. Each row (a–f) represents consecutive actions, displaying examples of the different types of handling methods: shaking (d) and tossing (a, b, c, e, f). Image: ©Kate Sprogis/Murdoch University Cetacean Research Unit

What’s the reward for such a simple but at the same time risky recipe? Sprogis thinks might be the high nutritional value that these dolphins can’t find anywhere else. Regarding the risky business part, well... the danger remains but the fact that these dolphins catch octopuses in murky waters and during the mating season of their prey (when they are more vulnerable) may facilitate both, catching and handling them. Not bad this strategic mind of a dolphin!

Original source: [Sprogis et al. 2017, Complex prey handling of octopus by bottlenose dolphins \(*Tursiops aduncus*\), Marine Mammal Science DOI 10.1111/mms.12405.](#)

This article has been previously published in Maddalena Bearzi [National Geographic](#) Blog

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The author during her marine mammal research off Southern California

Maddalena Bearzi has studied the ecology and conservation of marine mammals for over twenty-five years. She is President and Co-founder of the [Ocean Conservation Society](#), and Co-author of [Beautiful Minds: The Parallel Lives of Great Apes and Dolphins](#) (Harvard University Press). She also works as a photo-journalist and blogger for several publications, including the [National Geographic](#). Her latest book is [Dolphin Confidential: Confessions of a Field Biologist](#) (University of Chicago Press).

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