

Orcas prey on great white sharks in South African waters

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In this photo taken Wednesday May 3, 2017 and supplied by Marine Dynamics, a great white shark is autopsied on a beach in Gansbaai, South Africa. The formidable shark is just another meal to orca whales, which hunt in groups and can enjoy a diverse diet of seals, whales and a host of other marine species. (Tami Kaschke/Marine Dynamics via AP)

The great white shark is one of the ocean's most powerful predators, yet it is sometimes prey for orcas that killed several of the formidable creatures off South Africa's coast this month.

Rare autopsies conducted on carcasses that washed ashore show how orcas dominate the [marine food chain](#) at the expense of great white [sharks](#), whose ferocious reputation (thanks partly to the 1975 movie "Jaws") belies their vulnerability to shark nets, fishing, poaching, pollution—and the biggest member of the dolphin family. Orcas, which also face human threats, have a softer image (the 1993 film "Free Willy" helped) due to their intelligence and accessibility at water parks.

Bite marks on the carcasses in South Africa were inflicted by orcas seen recently near Cape Town, conservationists said. The livers of all three sharks were removed, suggesting the orcas, also known as [killer whales](#), targeted the nutrient-rich oil and fat in the organs and discarded the rest of their prey.

Each of the sharks had a big wound on its underside, a sign of the dexterity of the orca, whose biggest males can be well over nine meters (30 feet) long—considerably larger than great white sharks.

"It's just a classic sort of scenario of what orcas are capable of doing," said Alison Towner, a marine biologist with the Dyer Island Conservation Trust, which seeks to protect the fragile ecosystem in waters around the southern tip of Africa. Towner participated in autopsies on the sharks, providing rare confirmation of orca killings of the big fish off South Africa.

Even if they have an advantage, orcas are unlikely to hunt great white sharks on a regular basis, said George Burgess, director of the Florida Program for Shark Research. But smaller sharks can be a routine part of an orca diet, and studies have shown that the rough texture of shark flesh grinds down the enamel on orca teeth over time, he said.

Two of the sharks in South Africa were recovered in Gansbaai and another in Struisbaai. Closer to Cape Town, several cow shark carcasses

were discovered with their livers removed in False Bay after orca sightings, South Africa's department of environmental affairs said .

"Killer whales are apex predators and while we are accustomed to viewing great white sharks as occupying the top of the food chain in our waters, orcas are much more specialized hunters and consider almost anything in the ocean as potential prey," the department said. It said the mammals have highly developed social groups as well as a large brain, the capacity to learn and the ability to locate with the help of sound waves that bounce off objects.

"Orcas are known to have culture, much like humans do, and different orca cultures specialize on different prey and different hunting strategies," said Boris Worm, a marine research ecologist at Dalhousie University in Nova Scotia, Canada.

"Offshore orcas are rare, and very mobile, so it is very conceivable that they show up in an area where they were previously not seen and exploit sharks in that region," Worm wrote in an email to The Associated Press. "Of course, a white shark would be a difficult prey to tackle due to its power and size, but orcas (again like humans) use group hunting strategies that can outsmart almost any prey."

Orcas have been seen attacking cow sharks off Cape Town, New Zealand and South America. Additionally, orcas were filmed attacking great white sharks around the Farallon islands off California and Neptune islands off Australia.

South African cage-diving operators reported a drop in great white shark sightings around the time that the three sharks were killed, a sign that other sharks had left the area, at least temporarily, because of the orcas.

Researchers are debating the size of South Africa's [great white shark](#)

population and say more inquiry is needed. Human threats far outweigh any threat from [orcas](#), they say.

"We, as shark biologists, recognize that the sharks are going to get eaten sometimes by predators, just like they eat things themselves," said Burgess, the Florida expert. "It's all part of the give-and-take of the natural world."

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