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## **Study details first description of white sharks interacting with seals at Langebaanweg**

A new study recently published in the [South African Journal of Science](#) has found that white sharks began feeding on seal carcasses five million years ago at Langebaanweg. This is also the first description of white sharks feeding on seals from South Africa's geological past.

The study was based on anatomical analysis — a visual analysis of the bones to identify and assess them for any significant changes or damage. The damage on the bones was compared with the shark tooth marks on the cetaceans to identify the type of damage and which shark(s) were responsible for leaving the tooth marks. The type of damage was also used to determine the action of the shark to cause the damage, and the growth on the bone surface was compared with known disease in seals to identify if this was an infection.

Dr Romala Govender from the Department of Biological Sciences at the University of Cape Town and the Research and Exhibition at Iziko Museum said: "The bite marks on the bone suggests that some skeletonisation had occurred, further suggesting that white sharks were scavenging seal carcasses."

A close examination showed that phocid seals from Langebaanweg suffered from pathologies and bore marks of marine carnivore activity. The injuries showed no signs of healing, suggesting the most parsimonious explanation that white sharks were scavenging seal carcasses.

Govender said: "Five million years ago at Langebaanweg there were ragged tooth (sand tiger), white, and mako sharks. These sharks were drawn to the area by whale carcasses that were leaching body fluids, and this resulted in them coming in contact with phocid seal colonies in the area. At the time islands on the coast were ideal breeding and haul-out sites for the seals."

White sharks ambush seals off Seal Island, biting prey obliquely using their anterolateral teeth in a lateral snap, and attack seals at the water surface using a steep vertical attack. The bites on the humeri vary from superficial scrapes to deep bites penetrating the bone, suggesting that the shark and seal (carcass) were in motion and it [shark] not being able to get a firm grip on the bone.

"Larger sharks might have excluded other smaller sharks while feeding so these sharks had to look for other food sources. They would have fed on the seal carcasses that were floating in the area linking the islands with each other or with the mainland or actively hunted them.

Not only were these seals fed on by sharks, but one even suffered from an infection," she added.

"The lagoon and surrounding islands were linked like 'Shark Alley' today where seal carcasses may have remained afloat. It could also be interpreted that sharks did not frequent the area until there was a cetacean carcass to feed on and were opportunistically scavenging seal carcasses when excluded from the cetacean carcasses," she said.

This study is one of five globally that have documented marine carnivores feeding on seals.



White shark bite marks and infection (arrow in b) on the seal humerus.

Photo: Dr Romala Govender

**ENDS**

***Issued by: UCT Communication and Marketing Department***

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