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Ocean acidification a danger to sharks' teeth – 1st September 2025

Level 4

The climate crisis may be a threat to the existence of sharks. The acidification of oceans is decaying sharks' teeth. Scientists already know that increasing ocean acidity is damaging corals and sea creatures with shells. Biologists looked at whether shark teeth are at similar risk. Many sharks swim with their mouths open and are constantly exposed to seawater. The researcher concluded that even the teeth of sharks are now vulnerable to damage.

The researcher analyzed teeth from blacktip reef sharks. He put the teeth in separate water tanks for eight weeks. The salt water in one had an acidity level similar to current ocean averages. The water in the other tank was more acidic. The teeth in the more acidic water had visible damage, including cavities, root decay, and structural deterioration. Ongoing damage could impact how sharks feed. This could trigger "domino effects" across marine ecosystems.

Level 5

The climate crisis may be an existential threat to sharks. A new study shows that the acidification of the world's oceans is decaying sharks' teeth. It is well known among scientists that increasing ocean acidity is damaging species like corals and shell-dwelling sea creatures. This led biologists to look at whether shark teeth are at similar risk. Researcher Maximilian Baum investigated whether sharks that swim with their mouths open and have constant exposure to seawater "might also be vulnerable". He concluded that "the teeth of...predators show visible damage".

Baum analyzed 42 teeth from blacktip reef sharks at an aquarium in Germany. He put the teeth in two separate water tanks for eight weeks. The salt water in one tank had a pH level similar to current ocean averages. The water in the other tank was more acidic. Baum found that the teeth in the more acidic water had visible damage. This included cavities, root decay, and structural deterioration. He said ongoing damage could impact how sharks feed. He added that such damage could potentially trigger "domino effects" across many marine ecosystems.

Level 6

The climate crisis may be posing an existential threat to many species of shark. A new study has revealed that the acidification of the world's oceans is causing sharks' teeth to decay. It is well known in the scientific community that increasing ocean acidity is damaging calcified species like corals, molluscs, and sea urchins. This led marine biologists to research whether shark teeth are at similar risk. Lead author of the study, Maximilian Baum, investigated whether "sharks that swim with their mouths open to ventilate their gills and have constant seawater exposure might also be vulnerable". He concluded that "even the teeth of apex predators show visible damage under acidified conditions".

Baum and his colleagues analyzed 42 teeth from 10 blacktip reef sharks at an aquarium in Germany. They placed the teeth in two separate water tanks for eight weeks. The salt water in one tank had a pH level of 8.2, which is similar to current ocean averages. The water in the other tank was more acidic, with a pH level of 7.3. Baum found that the teeth in the more acidic water had "visible surface damage". This included cracks and cavities, increased root decay, and structural deterioration. He said ongoing damage could impact how sharks feed in the future. Such damage could potentially trigger "domino effects" across the health of many marine ecosystems.