### **Ocean acidification a danger to sharks' teeth**

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.

**Homework:**

1. Write a full sentence answer for each question below.
2. What kind of threat might ocean acidification be for sharks?
3. What is acidic water doing to the teeth of some species of sharks?
4. What ocean life is acidic water threatening besides urchins and molluscs?
5. Who is Maximilian Baum?
6. Why do some sharks keep their mouths open?
7. Where did the sharks live that were part of this research?
8. What is a pH level of 8.2 similar to?
9. What did researchers find decay in?
10. How could ongoing damage affect sharks?
11. What might experience domino effects because of acidification?

**Free Writing**

Write 7-10 sentences about the topic below:

* The oceans and humans need sharks. Discuss.