

Oceans acidifying much faster than was thought: study

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Courtesy University of Chicago and [World Science](#) staff

The oceans' acidity is growing faster than previously thought, scientists say—a process thought to be linked with rising levels of atmospheric gases that are blamed for global warming.



University of Chicago researchers detailed the new findings in a paper published online by the research journal Proceedings of the National Academy of Sciences Nov. 24.

During the course of the study, “the acidity increased more than 10 times faster” than climate change models and other studies had predicted, said the university’s J. Timothy Wootton, lead author of the study. “This increase will have a severe impact on marine food webs and suggests that ocean acidification may be a more urgent issue than previously thought, at least in some areas of the ocean.”

Wootton and colleagues said the process seems to be occurring in step with increasing levels of carbon dioxide in the atmosphere. Carbon dioxide is a key “greenhouse gas,” a compound that researchers say acts as a large-scale blanket in the atmosphere and that traps heat on Earth, driving global warming.

When atmospheric carbon dioxide dissolves in water it forms carbonic acid. Abnormally acidic water harms certain sea animals and could reduce the ocean’s ability to soak up carbon dioxide, the authors said. The study is based on 24,519 measurements of ocean acidity spanning eight years. “Many sea creatures have shells or skeletons made of calcium carbonate, which the acid can dissolve,” said the university’s Catherine Pfister, a co-author of the study.

Image: Ocean side rocks covered with mussels are one habitat that may be threatened by increasing ocean acidity, researchers say. (Credit: J.T. Wootton, U. Chicago).