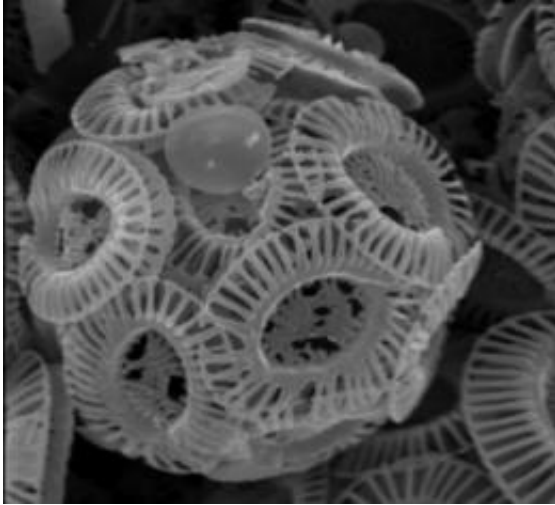


# Global change puts plankton under threat

May 4 2012

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Marine plankton under the microscope

Changes in the ocean's chemistry, as a result of increasing atmospheric carbon dioxide (CO<sub>2</sub>) levels, threaten marine plankton to a greater extent than previously thought, according to new research.

The research, published in *Nature* [Climate Change](#), revealed around half the CO<sub>2</sub> released through human activity dissolves in the ocean, where it forms carbonic acid leading to a decrease in seawater pH.

Scientists found the changes in the pH levels, along with global warming, could lead to poor growth if not death of [marine plankton](#).

Professor John Beardall from the School of Biological Sciences at

Monash University collaborated with international researchers from Swansea University's Centre for Sustainable Aquatic Research, who led the study, the Marine Biological Association, Plymouth, the University of Dundee and the University of Technology in Sydney.

Professor Beardall said the impact that ocean acidification-induced changes have on plankton was a major concern.

"This research suggests the impact of oceanic acidification upon marine plankton could be more serious than previously thought," Professor Beardall said.

"Acidity levels will more than double by the end of the century as a result of the increase in CO<sub>2</sub> levels in the ocean, but it is unclear how the growth of plankton will respond to this increase."

Using mathematical modelling and their understanding of cellular physiology, the team has found that many marine plankton will experience a substantially more acidic environment than currently suggested.

Professor Beardall plans to develop the research further to understand the effects of ocean acidification and other aspects of climate change on key Australian phytoplankton species.

**More information:** *Nature Climate Change* [doi: 10.1038/NCLIMATE1489](https://doi.org/10.1038/NCLIMATE1489)

Provided by Monash University

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