Causes and Consequences of Changes in Marine Biodiversity: Increased CO₂ alters species interactions

Increased atmospheric CO₂ causes a decrease in oceanic pH called ocean acidification. Numerous studies have demonstrated negative impacts on single species, but few have examined the effects on communities.

Under high CO₂ conditions, seaweed grew more and snails ate more seaweed, but snails did not grow more. Experiment was performed in mesocosms, with a similar algal response occurring in the field.

Seaweed grown under high CO₂ conditions has more carbon in its tissue. This shift in tissue content represents a change in food quality and may explain the increased rate of grazing seen in this study.

• This research shows that herbivore-producer interactions are likely to be modified under increased CO₂ conditions
• Understanding changes in species interactions will help in predicting the composition and dynamics of a future ocean

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