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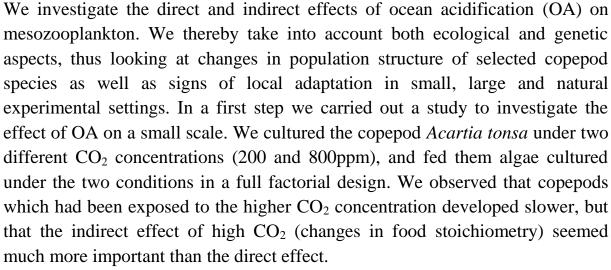
Can mesozooplankton organisms adapt to the changing chemical composition and degradation in food quality caused by ocean acidification?

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During a mesocosm experiment we took regular plankton samples which will be used to perform population genetic studies to investigate differences in species composition and genotype frequency between populations suffering under OA and those exposed to present-day CO₂ conditions. If OA causes a selective pressure, there should be changes in the biodiversity and genotype frequency.

Additionally, we aim for an understanding of the impact of high CO₂/lower pH on the fitness of mesozooplankton organisms. We hypothesize that organisms can adapt to the changed chemical composition of the water and to the degradation in food quality. To detect those adaptations and furthermore to investigate the heritability as well as the evolutionary effect of OA we carried out transplant experiments with *Pseudocalanus acuspes* from the mesocosms.

