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## Intraspecific diversity and the selection of correlated sensitivities to multiple global change factors

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Population responses to global change are driven by multiple factors interacting with each other and with intraspecific diversity. Correlations between responses to different drivers can alter selective outcomes dramatically. In three near-natural experiments, we explored response correlations of genetically different full-sibling families of seaweed germlings towards four global change drivers: elevated CO<sub>2</sub> (ocean acidification, OA), ocean warming (OW), combined OA and warming (OAW), nutrient enrichment and hypoxic upwelling. Among families, sensitivities towards OA and OW as well as towards OAW and nutrient enrichment correlated positively whereas sensitivities towards OAW and hypoxia anti-correlated. This indicates a trade-off between OAW and hypoxia acclimation and may further imply that fast adaptation to one or two global change factors could be nullified by an associated increase in sensitivity towards a further stressor. We conclude that response correlations have a huge high potential to boost or hinder acclimation and adaptation to multifactorial global change scenarios.

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