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TITLE: CO2 sensitivity experiments are not sufficient to show an effect of ocean acidification

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ABSTRACT:

The ocean acidification (OA) literature is replete with laboratory studies that report species sensitivity to seawater carbonate chemistry in experimental treatments as an 'effect of OA'. I argue that this is unintentionally misleading, since these studies do not actually demonstrate an effect of OA but rather show sensitivity to CO₂. Documenting an effect of OA involves showing a change in a species (e.g. population abundance or distribution) as a consequence of anthropogenic changes in marine carbonate chemistry. To date, there have been no unambiguous demonstrations of a population level effect of anthropogenic OA, as that term is defined by the IPCC.

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