

Interactive comment on “Ocean acidification accelerates dissolution of experimental coral reef communities” by S. Comeau et al.

S. Comeau et al.

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Response to A. Ridgwell comments:

We thank A. Ridgwell for his useful comments.

Comment 1: "What was the mean carbonate saturation of the water in the two treatments? (Or did I derp completely on reading your paper and miss it?) Actually, it would be helpful/interesting to know all of the carbonate chemistry parameters."

Response 1: The aragonite saturation state was ~ 3.5 in the ambient treatment and ~ 1.6 in the high pCO₂ treatment. As suggested a table (Table 1) showing the carbonate chemistry is now included in the revised manuscript.

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Comment 2: "Also – do you have any sense for whether the ambient carbonate chemistry of the corals/algae 'downstream' in the flume, was more buffered compared to individuals growing upstream? Or is the flow sufficiently fast that the chemistry is effectively uniform along the length of the flume?"

Response 2: We did not measure any significant change ($\sim > 0.01$ pH unit) in pH between upstream and downstream. It was likely due to the relatively fast flow and the limited length of the working section (5 m).

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