VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wānanga o te Ūpoko o te Ika a Māui



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Dear Dr Steven Lade

11/03/2024

We received the editorial comments on 29/02/2024 that we address below. We thank you for your time in appraising our manuscript. We detail the comments we received in quotations and in italics below, followed by our revisions and responses in plain text after each comment.

"I find unsatisfactory the authors' response to the comment beginning 'There is almost no discussion of "tipping points" in subsections 2.2 and 2.3 on "photophysiology" and "internal pH regulation"...'.

- References to tipping points in section 2.2 remain sparse, limited only to the final paragraph, despite the reviewer's repeated requests to include them. It would be worthwhile clarifying which mechanisms referenced in previous paragraph could be potential tipping points.

- I understand identifying the position of the tipping point is difficult given current literature, or even impossible given the extent to which the tipping point is affected by other pressures. However, I think the reviewer is saying that acknowledging there is evidence for a tipping point is useful, even if the exact position cannot be found."

We have now modified this text further to point out where these occur.

Note that there are 11/17 identified tipping points for calcification/growth but only 3/9 for photosynthetic rates and 3/17 for internal pH. Hence our reluctance to discuss them.

"Otherwise I find the authors' changes and responses to be appropriate. I have just a couple final minor style suggestions:

- To have the introduction as one long single paragraph is unusual. I suggest to break it into multiple paragraphs".

Amended as per the editor's suggestion.

"- Consider referring to Table 1 and especially Table 2 earlier. For example you could write "provide pCO2 values of when this typically occurs (Table 1)" in introduction"

Amended as per the editor's suggestion. We now refer to them in the introduction.

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"- It's also unusual to have as key methodological detail as the search terms for a review buried in the caption (Table 2). I suggest you promote this to the main text."

Amended as per the editor's suggestion.

"- I also note the journal's comment about colours not being permitted in tables. You will need to either submit the Table as a Figure or remove colouring from the Table. Or perhaps you could design a figure that communicates the Table's information graphically and with annotations indicating the numbers and references."

We have now turned this into a figure (Figure 1) and modified it by removing the references and adding a key.