REPLIES BY THE AUTHOR IN BOLD, BLUE FONT

RC4: 'Comment on essd-2021-345', Hayley C. Cawthra, 30 Nov 2021
It has been a great pleasure to review Daniel Muhs' review paper ‘MIS 5e sea-level history along the Pacific Coast of North America’. This is a long and complex geographic area to cover, with a lengthy history of investigations of its Quaternary deposits, and the author has described the records in a carefully thought out and clear way, with excellent figures to supplement the text. I felt that the accompanying database of sea-level records for the WALIS compilation was well referred to and it cross references well.

Thank you very much for these kind comments.

In addition to the MIS 5e deposits and their relevance in a context of RSL, this review lays out the role of antecedent structure in the deposition and preservation of these features; biological and geological indicators of sea level and the ranges of accuracy associated with them; benefits and limitations of various dating methods; and a useful comparison to younger (Holocene) and pre-MIS 5e sea-level records. The final section ‘Future research directions’ provides useful tips for topics that could merit additional work, based both on a thorough literature review and observations based on personal field experience.

Thank you.

I have only three very minor suggestions and one point to consider:

To further expand on the limitations of using marine terraces as indicators of RSL, considering repeated reoccupation by sea-level stillstands

This is an excellent point, and we certainly have evidence on the Pacific Coast of repeated reoccupation of terraces (for example, the evidence from both U-series dating and faunas of mixes of ~100 ka (MIS 5c) and ~120 ka (MIS 5e) fossils on terraces at several localities. I allude to this in the “Introduction” (section 1), but I have added some text reminding readers of this now in the “Sea level indicators” (section 2).

In Lines 35 and 40: the use of the word ‘complex’ had me thinking of an igneous intrusive complex, so perhaps just refer to ‘the last interglacial’?

Another good point, and after looking the manuscript over, I realized I never use this phrase again, so why use it here and complicate matters? I have eliminated it in the two lines you refer to and I follow your suggestion and simply call it “the last
interglacial”. For clarification that I am talking about MIS 5.5 alone, I also added a line at the end of this paragraph as follows: “Some investigators also consider that MIS 5.5 alone is the last interglacial (sensu stricto).”

Please re-run a check of abbreviations as I noted that some were expanded more than once in the main text (GIA, LIG, RSL).

**Good catch! I found a number of repeats and have now fixed them all. Thanks!**

I have no doubt that this paper will be well received by the community. Again, it was a pleasure to review.

**Thank you.**

Kind regards,

Hayley Cawthra

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