

## 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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