

Earth Syst. Sci. Data Discuss., referee comment RC1
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Comment on **essd-2021-345**

Jessica Creveling (Referee)

Referee comment on "MIS 5e sea-level history along the Pacific coast of North America"
by Daniel R. Muhs, Earth Syst. Sci. Data Discuss.,
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In the ESSD submission "MIS 5e sea-level history along the Pacific Coast of North America", author Daniel Muhs presents a thoroughly researched and illustrated compendium of Last Interglacial sea level markers for the North and Central America Pacific coast from southern Canada to central America. This is a valuable contribution across multiple themes, including:

- A systematic, north-to-south guide to MIS 5e (or purported 5e) sedimentary deposits and marine terraces (erosional and constructional) from British Columbia, Canada to the Osa Peninsula, Costa Rica with a rich discussion of the primary descriptions of these locales.
- A description of relevant geochronological methods used to date these indicators, with a broad bibliography for each method.
- A more concise, but equally informative summary of older and younger terraces situated above and below purported/dated MIS 5e indicators, with implications for local uplift histories.
- A nuanced discussion of how the MIS 5 (sensu lato) paleozoogeography informs regional climate constructions and bears on questions of a warming world.
- And a thoughtful summary of remaining controversies and how these can direct future inquiry across multiple methods, from GIA to geochronology to field geomorphology.

I have read the submission twice in full and learned from both readings. Muhs' writing and illustrations are exceptionally clear. I found nothing to quibble with and I believe that any reader, regardless of expertise or experience, will gain from this remarkable synthesis. I advocate for the publication of this submission without any change from its current format.

Best regards,

Jessica Creveling