

Clim. Past Discuss., author comment AC1
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Reply on RC1

Christopher M. Lowery et al.

Author comment on "Enhanced terrestrial runoff during Oceanic Anoxic Event 2 on the North Carolina Coastal Plain, USA" by Christopher M. Lowery et al., Clim. Past Discuss., <https://doi.org/10.5194/cp-2021-25-AC1>, 2021

We are happy to read that Reviewer #1 found the paper well-written and worthy of publication in Climate of the Past with minor revisions, and we appreciate their helpful comments on the text. We'll respond to each of the reviewer's points below, starting with the last but probably most substantial comment on the Plenus event.

-Line 355-360: this interpretation is incorrect. O'Connor et al. state that there was no drawdown of CO₂. The original Barclay et al. data indicate an increase in CO₂, and this interpretation is supported by O'Connor et al.

This is a good point, and as written we gloss over a lot of the discussion that's surrounded the Plenus event over recent years. This was driven by a desire not to get bogged down in a lengthy discussion the evolving understanding of the Plenus event (especially the role of CO₂ drawdown, which, as the reviewer states, is not supported by the evidence), which would have eventually ended with a refutation of the CO₂ drawdown anyway. To avoid this (after all, the ultimate driver of the Plenus event is only tangential to our central topic of changing terrigenous flux) we have simply deleted the reference to reduced CO₂ in this section, and limit our discussion to the correlation to observed cooling and reduced terrigenous flux in the Bass River core by van Helmond et al.

-En dashes should be used instead of hyphens when indicating 'to'. e.g., Cenomanian–Turonian.

this can easily be done

-Line 141: what kind of work? Biostratigraphy?

Yes. This can be clarified.

-Line 172: what molarity was the acid?

The acid is 1M HCl

-Line 195, 324, 385: please avoid using terms such as 'this' or 'these' without qualifying. Check throughout

I don't see an unqualified "this/these" at line 195 but can definitely be careful clarify these terms throughout the text.

-Line 200: 201.2 m

Oh yes good catch!

-O'Connor et al. 2019 should be 2020

whoops, so it is! can easily correct this.