

Comments on revised version of “Southern California margin benthic foraminiferal assemblages record recent centennial-scale changes in oxygen minimum zone” by Palmer et al.

Referee #2

Overall, I am happy with the revised version answering and revisiting all the comments I had made. There are final minor details that I would recommend authors to have another look. Below comments indicating line numbers are based on the file showing track changes “**bg-2019-446-author_response-version1**”.

- Please check usage of abbreviation OMZ throughout the text. Sometimes within the same paragraph it is used and followed by oxygen minimum zone (e.g., first paragraph of introduction; paragraph starting with line 595).
- Relationship between nitrate and benthic foraminifera could still be improved. Current stage of the discussion serves the purpose of the manuscript and I am aware nitrate was not measured. Nevertheless, I think adding the potential impact of nitrate availability on certain species would only make the MS better. In case Authors decide to improve this part, I would highly recommend them to check publications from Kuhnt et al., 2013 (<http://dx.doi.org/10.1016/j.dsr.2012.11.013>) and Glock et al., 2019 (www.pnas.org/cgi/doi/10.1073/pnas.1813887116) and the references therein.
- Paragraph starting with line 124 is rather confusing. It says studies focusing on benthic foraminifera in Southern California are limited to the basins and there are few other from outside. Both Mallon and Erdem reported foraminifera from the Peruvian margin. I would recommend either remove these citations or change the description to Eastern Pacific Ocean continental margin, or something like that. In this case, please check Cardich et al., 2019 (<https://doi.org/10.3389/fmars.2019.00270>).
- Line 419. Short names can be given instead of the full names of the species.
- Table 1. Four digit after decimal points needed?
- I am glad to see a plate included in the supplementary material. When I mentioned about a species list with references I had something like this I prepared below. These are species mentioned in the manuscript. Hopefully, I did not miss any. This could be included after the plate as done in Balestra et al., 2018; Erdem and Schoenfeld, 2017.

Example taxonomic reference list for benthic foraminifera species mentioned in the MS:

Bolivina argentea Cushman 1926. (Figure S4)

Bolivina spissa *Bolivina subadvaena* Cushman var. *spissa* Cushman 1926 (Figure S4)

Bulimina sp. (any note on why species is not identified?)

Cassidulina carinata *Cassidulina laevigata* d'Orbigny var. *carinata* Silvestri, 1896 (Figure S4)

Cibicoides sp. (any note on why species is not identified?)

Epistominella sp. (Figure S4)

Globobulimina pacifica and so on...

Globobulimina ovata

Globocassidulina subglobosa (Figure S4)

Nonionella stella

Quinqueloculina sp (any note on why species is not identified?)

Uvigerina peregrina (Figure S4)