

Interactive comment on “The bivalve *Glycymeris planicostalis* as a high-resolution paleoclimate archive for Rupelian (Early Oligocene) of Central Europe” by E. O. Walliser et al.

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This is a very interesting and well-written manuscript that is worthy of publication in *Climates of the Past*. The methods employed are well grounded, and the diagenetic assessment is thorough and convincing. I only have a few comments that I recommend be addressed before publication.

When I began reading this manuscript, I was expecting a paleoclimate reconstruction for the Early Oligocene, but when I got towards the end of the manuscript it more seemed like an evaluation of whether *Glycymeris planicostalis* shells are useful to reconstruct climate conditions during this time. The authors should more clearly direct

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the focus of the paper up front.

What was insolation like at this time? How similar or different was it from today? This is potentially important when suggesting that the early Oligocene climate is similar to conditions predicted for the near future.

Where on the shell were the oxygen isotope samples collected?

The authors should be careful about making statements about quasi-decadal oscillations in their data series because the intervals sampled are too short to make such an assessment.

Other minor comments:

First line on page 4092 is missing a word: From the of Glycymeris. . .

Page 4093, lines 10 and 22: Should be “oxygen isotope ratios” or “oxygen isotope composition” not “oxygen isotope values”. Fix throughout.

Page 4098, line 19: Should be . . .average maximum (summer) values. . .

Page 4099, lines 10-11: Reword the beginning of the second sentence: Not only do the shells consist of aragonite. . .

Page 4103, line 25: Reverse the order of the temperature range so that the lower value is first.

Page 4103, line 26: Should be: . . .lay well within these. . .

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