

Technical note: A new online tool for $\delta^{18}\text{O}$ -temperature conversions. Review: B. Metcalfe

The authors have made the recommended changes or sufficiently explained why the comments of the previous review either no longer matter (e.g., removing section 3) or inconsequential to the current paper. I recommend publication as is, with only the following textual modifications (these could also be done at the proof reading stage):

Line 119: “of the carbonate, $\delta^{18}\text{O}_c$ is” the second comma is wrong?

Line 127: maybe clarify here what flag, i.e., just add (NaN) or (-99)?

Line 347: the bracket before (doesn't have its partner, and shouldn't 2012 be (2012)?

Code availability section: I would add the licence type and DOI to this section, i.e., “Source code (Javascript and PHP) is openly available under a – *name of licence* - license from the project's GitHub repository at ... (DOI: - *doi*)” with the persistent identifier DOI obtainable via [1].

Licensing

I would add a 'licence.txt' file to your GitHub (LICENSE.txt; LICENSE.md or LICENSE.rst) in the root of the repository not just adding the licence in the README or in proxy.php, as per [2] it is considered a “... best practice, we encourage you to include the license file with your project”.

Note

Inconsequential to the paper but in the Author response to the other reviewer (pg 7) you state that: “Core-top calibrations such as bayfox are constructed by comparing annually-averaged forams (such as core tops) to annually-averaged $d^{18}\text{O}_{\text{sw}}$ (such as that estimated by LeGrande & Schmidt 2006, Tierney et al. 2020, etc.), which avoids the problem altogether by implicitly baking seasonal variations in surface $d^{18}\text{O}_{\text{sw}}$ into the calibration equation and its corresponding uncertainty bounds.”. It is an assumption that this implicitly bakes it in, but core tops are not annually averaged per se. They can be seasonally skewed based upon ecological preferences of individual foram species and this will vary in terms of where the sample is taken with respect to a species ecological space/biography. If the species ecological window overlaps with the core tops environmental range then it can be considered to represent an annual signal (although even then that assumes there is not a flux, sampling, or picking bias), but in most regions it will be biased toward one season or another (see Mix (1987); Mulitza et al., (1997); or Pracht et al (2019)). Worse there is also depth habitat to consider, which may vary also regionally. So, I would respectfully disagree that core top calibrations ‘implicitly bake in seasonal variations’ by using annual averaging unless they implicitly take into account season and depth which few do.

References

[1] <https://docs.github.com/en/repositories/archiving-a-github-repository/referencing-and-citing-content>

[2] <https://docs.github.com/en/repositories/managing-your-repositorys-settings-and-features/customizing-your-repository/licensing-a-repository>