Laboratoire Paléontologie Evolution Paléoécosystèmes Paléoprimatologie
UMR 7262 CNRS – Université de Poitiers, France

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Dear Editors,

Enclosed please find our revised manuscript bg-2023-125, entitled 'Stable oxygen isotopes of crocodilian tooth enamel allow tracking Plio-Pleistocene evolution of freshwater environments and climate in the Shungura Formation (Turkana Depression, Ethiopia)'.

We thank you for taking the time to review our revised manuscript and providing further feedback. We have incorporated most of the comments and suggestions proposed by the referees, and you will be able to follow the modifications and revised sections in the manuscript.

We were waiting for the referees' reports and the validation of our revised manuscript to send you a Graphical Abstract (Designed by EunJung Park at Science Graphic Design) which could possibly be used for the article published on your website.

In the paragraphs below, we provide answers to your comments:

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Table 1: given the analytical uncertainty of the analyses, consider whether presenting d18O data with 2 decimals is appropriate. The new column (showing the range) has a mix of 1 and 2 decimals.

Thank you for this remark, we will only keep the first decimal place and make the necessary changes in Table 1.

Figure 4 and 5: increase font size for X and Y axis titles and tick mark labels so that they will remain clear in the final figure size.

We have made these changes.

Table 2, since you mention central Africa - note that there is also a reasonably long recent time series from a GNIP station in Kisangani (available through GNIP/WISER).

Thanks for suggesting it. However, the example of Goma in Central Africa was chosen because it is the station with the maximum precipitation (and not too far from eastern Africa), close to the estimates obtained if the variations in $\delta^{18}O$ were due to the amount of precipitation. The precipitation in Kisangani is much lower and would not serve for illustrating this example.

Figure 8: I realize there is a lot of info to show on this figure, but would suggest here also to try to increase the font sizes where possible to improve readability. The two panels on the right side show a gradient in the green color - the figure caption does not mention what this represents, does it merely change along the d13C and thus woody cover gradient (and hence, holds no extra information) ? Consider to either mention this explicitly, or remove the color gradient if not relevant.

We have made some modifications to "lighten" (slightly) the figure and enlarge the texts. Carbon isotope data for Shungura and Nachukui are shown in the same graph. We removed the color gradient that was not necessary and used the colors to distinguish Shungura and Nachukui.

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We very much look forward to seeing our paper published in the *Biogeosciences*.

Sincerely,

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