

Interactive comment on “Calibration of Mg / Ca and Sr / Ca in coastal marine ostracods as proxy of temperature” by Maximiliano Rodríguez and Christelle Not

Maximiliano Rodríguez and Christelle Not

xamrodri@hku.hk

Received and published: 18 January 2021

RC2: This is an excellent paper extending the Mg/Ca paleothermometry method to two shallow water genera common along coasts of SE Asia. One genus lives in hypoxic low salinity waters. I also like the link to internal modes of climate variability, such as ENSO. The paper carefully evaluates the importance of using many, adult specimens or the best results, a result some other recent papers simply because they do not use enough carefully selected specimens, well preserved adults. The statistics on the Mg/Ca to temp. correlation are impressive when 7 or more specimens are used. Another positive aspect of Rodríguez and Not is the careful selection of hydrological

Printer-friendly version

Discussion paper



data including excellent water temperature datasets. The figures and maps are excellent and captions are very complete. The geochemical analytical methods are also very impressive. With a few published exceptions for *Loxoconcha*, the seasonal data in Figure 3 is an important part of understanding time of adult shell secretion. The paper is well referenced. I would suggest Farmer 2011 and 2012 on Arctic *Krithe* should be mentioned in the discussion for a more complete assessment of inter-generic Mg-temp relationships. Although the paper as a source of new data is fine as it is written, the section 4.4 provides an invaluable review of other genera and demonstrates similar Mg/Ca-temp relationships and I wonder for completeness, they could add to figure 6 and the discussion other genera from other superfamilies [*Krithe*. . .]. I look forward to seeing these calibrations applied to Holocene sediment records of climate variability.

Reply: We appreciate the positive comments from RC2. We initially decided to compare shallow marine ostracods from the same superfamily, because of their similarities. We recognize that by adding other species from deep seas, we can provide a more robust analysis and discussion. As *Krithe* belongs also to the superfamily, *Cytheroidea*, we will incorporate it using Farmer 2011 and 2012 data.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-343>, 2020.

Printer-friendly version

Discussion paper

