



EGUsphere, referee comment RC1  
<https://doi.org/10.5194/egusphere-2022-576-RC1>, 2022  
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## **Comment on egusphere-2022-576**

Anonymous Referee #1

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Referee comment on "Ultradian rhythms in shell composition of photosymbiotic and non-photosymbiotic mollusks" by Niels J. de Winter et al., EGU sphere,  
<https://doi.org/10.5194/egusphere-2022-576-RC1>, 2022

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de Winter et al. present a comprehensive dataset on trace elements in scallops and giant clams. The data are robust and they do a good job presenting them. My comments are minor and mostly deal with adding to the discussion and referencing previous works.

I recommend to publish with minor changes.

Abstract

Reads too positive – should be toned down.

E.g.,:

“now enable the use of mollusk shells for paleoenvironmental reconstructions at a daily to sub-daily resolution”

“We find significant expression of these periodicities”

L518-519 – be more explicit and less colloquial. “There is some discussion”? In the

published literature? Maybe say previous studies... Then "This study's" – are you referring to the citations in the previous sentence or are you referring to the work you present here? Also, "the same year in the same environment" as what?

L521 "arguing against a simple temperature dependence for Mg/Ca" – maybe say agreeing with previous studies

L523 – Lorrain et al. 2005 also found this – state that here

L536 Gillikin et al. 2006 (doi:10.1016/j.gca.2005.09.015) discuss separating the background Ba/Ca from the peaks. If these shells all grew in the same salinity they should all have similar background values. Do you see this? I think this should be commented on here.

L541 – the subheader here is wrong, this section is about scallops

L599 – should discuss Carre et al 2006 (already cited) and Gillikin et al. 2005 (doi:10.1029/2004GC000874) here.

Section 4.4.2 – I don't think this section clearly shows how your data contribute to this

idea. It's mostly a discussion of previous studies. A sentence or two blending your results into this would bolster this discussion.

Many citations are missing journal names (e.g., L895, L903, L919, L924, L927, L929, L936 and many others...)