

Interactive comment on “Monsoonal forcing controlled cold water coral growth off south-eastern Brazil during the past 160 kyrs” by André Bahr et al.

Anonymous Referee #2

Received and published: 2 September 2020

Comments to the Author The manuscript submitted here investigates the impact of monsoonal variability on CWC growth in last 160 Kyr. While the authors present a manuscript with compelling arguments; that is likely to be of interest to readers of Biogeosciences, I have a few of concerns that should be addressed before publication.

1. Authors try to show how the monsoon impacted CWC growth without providing any direct correlation between the two, which is a simple statistical analysis to do.
2. The discussion section needs to be streamlined towards the main objective of the manuscript, which now rather seems to be a collection of different points without the central theme. It's difficult for a reader to go through the whole discussion and find

C1

exactly where the authors prove their central claim. While discussing many proxies is necessary for a paper like this, it's also important to stress how these proxies help to prove your central claim, which is something lacking in the manuscript. 3. While the growth of CWC during HS events is very evident visually, why the CWC growth was not observed during MIS3 and MIS4 is still not clearly explained. While TOC is the only proxy that was different during these stages but high TOC didn't promote CWC growth at 20-40m depth. So it seems that TOC is not a singular factor affecting CWC growth. While authors have explained water currents and terrigenous input as some other proxies to impact CWC growth, they seem to be fluctuating a lot in all the MIS stages and hence fail to shed any light on what stopped CWC from growing during MIS3 and MIS4. 4. The figures captions throughout the manuscript describe what is shown in the figure, but don't provide the reader with any additional information such as calling attention to the significant result. The message shown by the figure is left entirely up to the reader to decipher. Moreover, in some figures authors have added depth and in some age. It would be best if authors add age and depth in all the figures. 5. Line 48: "The most common framework-forming CWC comprise." This sentence doesn't make sense. It is either incomplete or needs to be restructured. 6. The next sentence in line 49 "Changes the species..." Is also incomplete and hence doesn't provide context. 7. Line 55: "in" repeated "similar studies in the feeding in the properties..." 8. Line 72: It should be "adapted" instead of "adopted". 9. Line 77 -79: "This setting allows us.... growth at Bowie mound". It is a repetition of what has been already said in previous sentences. 10. Line 369: "AAIW seemed to had an insignificant" It should be "to have had" or "AAIW had" depending on what authors want to say exactly. 11. Line 384: "does not necessarily led to". It should be "lead"

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2020-206, 2020.

C2