

Interactive comment on “Influence of late Quaternary climate on the biogeography of Neotropical aquatic species as reflected by non-marine ostracodes” by Sergio Cohuo et al.

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We deeply appreciate your comments and suggestions, and we consider that they greatly improve the manuscript.

Comments 1, 2: We will clarify in text the version of WorldClim database used, and we will also include (in supplementary material) our variable correlation analysis, ran previously to SDM performance.

Regarding to comments 3 and 4, We consider them highly valuable, as niche overlap analysis may be a powerful tool to support our discussion. We are only worry about the

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fact that past environmental variables (for PCA) are afflicted by high degree of uncertainty between time period and climate model, and then we are not sure how confident the niche overlap comparison could be for this study. In fact, the main interpretations of the manuscript such as species responses during climate events are based on fossil evidence more than environmental, because fossil record provide true evidence of the presence / absence of target species. We therefore compare species assemblages and abundances between time periods to infer effects of climate variability. In this sense, SDM's are only used to evaluate potential amplitudes of distributional areas, only when fossil evidence confirm the presence of a given species. In any case we will perform the niche overlap comparison and will consider the results. We are also wondering whether the analysis can be done by using multiple time periods, for which it could be more informative.

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