

Interactive comment on “Gastropod diversification and community structuring processes in ancient Lake Ohrid: a metacommunity speciation perspective” by T. Hauffe et al.

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General comments: The authors present a highly interesting study on the impact of community assembly processes on the structure of gastropod communities in Lake Ohrid. While most other studies focus on single processes, the authors apply an innovative and very comprehensive approach using up-to-date statistical analyses and simulation techniques (and even inventing new ones), in order to integrate as much information as possible. They convincingly demonstrate the importance of dispersal limitation, and to a lesser extent environmental filtering and species interactions, and that the specific impact of each process varies spatially. The results and conclusions

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on the non-exclusive roles of ecological and geographical speciation are important advances in the study of speciation in ancient lakes and speciation in general.

The hypothesis of the study is clear and the methods are sufficiently outlined and support the results. Title and abstract reflect well the content of the paper. The paper is well written and structured and the English is of a high quality. The authors give proper credit to published studies in the field.

I have only a few remarks, which rather are suggestions, and therefore recommend publication after minor revision.

Specific comments: I would like to see an additional figure showing the geographic position of Lake Ohrid (similar to the one you give in Föller et al. 2015 Biogeosc. Disc.). This would help readers not familiar with the lake and where it is located. The other figures are well made and essential to show sampling sites and eco-zonation and to highlight the relative importance of the three processes depending on the eco-zones.

The authors mention three times in the text (Abstract, Introduction, Conclusion) that the findings contribute to the goal of the SCOPSCO initiative. Maybe you could take it out in either the conclusion or the abstract.

Technical corrections: Abstract, Line 4 – "...is mainly driven by...." – maybe change to: "...was and is mainly driven by...." (as diversification that shaped the present picture occurred in the past) Abstract, Line 11 – I am not perfectly sure, but I think it should read "process-based" (with hyphen; occurs several times in the text) Abstract, Line 19 – delete the comma after "environmental filtering" Page 16084, Line 2 – delete "(reviewed in Hubert et al. 2015)", as you refer to that work in more detail in the following paragraph anyway. Page 16084, Line 19-20 – put "eco-zones" instead of "eco zones" Page 16091, Line 8 – delete the comma after "environmental filtering" Page 16091, Line 20 – it should read "three-dimensional" (with hyphen) Page 16092, Line 2 – replace the semicolon by a parenthesis Page 16092, Line 11 – add a comma after "Hauffe et al., 2011" Page 16095, Line 18 – correct "disentangle" to "disentangling"

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Best regards, Thomas A. Neubauer

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