

Interactive comment on “Negligible effects of ocean acidification on *Eurytemora affinis* (Copepoda) offspring production” by A.-K. Almén et al.

Anonymous Referee #2

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General overview: The manuscript “Negligible effects of ocean acidification on *Eurytemora affinis* (Copepoda) offspring production” provides a holistic view through integrating both the direct and bottom-up effects of OA on copepod reproduction, composition and defense against oxidative stress. The latter two responses were a novel aspect of this study, providing new areas of research into the copepod OA field. The other nice aspect of this study was the use of wild copepod and phytoplankton species, as opposed to using laboratory cultures. Furthermore, this study has provided information on a species of copepod that has scarcely been researched with respect to OA, and therefore would be beneficial to the scientific community. However, a few minor areas need to be addressed before publication. Please find this outlined below.

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Introduction: Page 17096 line 29: A more appropriate reference could be used here rather than Riebesell and Tortell e.g., Schoo et al 2013. Page 1098 line 22: Please can you put in the deviation with these averaged fCO₂ values.

Method: Page 17099 Line 8: Were the females incubated individually with 10 replicates, or were there 10 individuals per replicate? If the latter applies, how many replicates were used? Line 28: Why were only first stage nauplii included in the analysis? If all nauplii were filtered out and preserved daily, then nauplii beyond stage 1 should be counted as these too would have been produced from the females over the preceding 24 hours. Page 170102 Line 4: spelling error “fort” Line 25: did you analyse the fatty acid response of the eggs to the pH? If so, please produce the results. If not, perhaps this should be done to determine a secondary effect of pH on female reproduction, or indeed a direct response of pH on the eggs. Page 17103 Line 11: What did you plot the standardised residuals against? fitted values?

Results: For Figures 2, 3 and 4 please put in correlations (R²), significance (p-value) and equations on the graphs or in the legends. For Figure 1, please add in the standard deviations. In Figure 2b, the are a few outliers, did this not influence the LMM? In other words, was the variance structure in the standardized residuals of this model valid?

Discussion: Page 17104 line 5: can you add in the natural variability in pH/fCO₂ experienced by the copepods on a daily basis in your area of research. I think this would be a strong addition to this argument.

Interactive comment on Biogeosciences Discuss., 12, 17093, 2015.

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