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Interactive comment on "Ocean acidification increases photosynthate translocation in a coral–dinoflagellates symbiosis" *by* P. Tremblay et al.

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This is not a full review, just an open comment providing some suggestions on this interesting manuscript.

- The title and first paragraph of the introduction set the experiments in the context of anthropogenic ocean acidification and the abstract concludes "this decrease might have important consequences for the survival of corals under an acidification stress". Yet, the perturbation used, pH of 7.2 and pCO_2 of almost 4000 μatm, are not relevant in this context. Barry et al. (2011) provide guidelines on the experimental design of ocean acidification perturbation experiments. I suggest that

the title, abstract and introduction should be revised in order to avoid misleading the readership.

- It is absolutely essential to mention the pH scale used (pH_{NBS}, pH_T, pH_f or pH_{SWS}) every time a pH value is reported (see Pesant et al., 2010). Yet, the pH scale is not mentioned at all in this manuscript. The reader is referred to the discussion paper of Cohen and Fine (2012) which used the NBS scale and converted the values on the total scale using a very approximate approach.

- Arbitrary values are used for the photosynthetic and respiratory quotients (respectively 1.1 and 0.8). There are very few values reported in the literature for scleractinian corals but data are available for the species investigated here (*Stylophora pistillata*) from a very close location in the Gulf of Aqaba (Gattuso and Jaubert, 1990). These values range from 1 to 1.5 for PQ_{net} and from 0.7 to 1 for RQ_c. I am not sure whether using these values would significantly alter the results and conclusions but the authors may want to address this concern.

I hope that the authors will find these comments useful.

Reference cited

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