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Interactive comment on “An overview of chemosynthetic symbioses in bivalves from the North Atlantic and Mediterranean Sea” by S. Duperron et al.

Anonymous Referee #2

Received and published: 9 January 2013

The manuscript "An overview of chemosynthetic symbioses in bivalves from the North Atlantic and Mediterranean Sea" presents a synthesis of the state of the art regarding the ecology, life cycle, and connectivity of five bivalve families (Mytilidae, Vesicomyidae, Solemyidae, Thyasiridae and Lucinidae). There is barely new data presented, being the manuscript basically a synthesis of the existent data. It is an extensive review, and there are extensive parts that should be concise on a table. Sometimes is difficult to read, and I advise the authors to improve the English, and avoid terms like it seems, probably, etc. There is a lack of illustrations resuming the 3.1 ; 3.2; 3.3; 3.4 sections; A schematic view will help the readers to understand the comparison between the different families, relating with their habitats, symbionts and its functioning. Specific

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comments:

Pag.16821 Line 15. This statement (Mussels occur. . .most anoxic niches) is based on the work of Fisher et al; Desbruyeres et al; etc. and not from the authors work. The references shall be acknowledged.

pag 16824 Line 26: The authors refer to isotopic data, but no reference is given. Is the statement related to the scientific papers Trask and Vandover 1999 and Colaço et al, 2002?

Page 16826 Line 20 What does the authors mean with “ none of these seems to harbor methane –oxidizing symbionts”- They have or they do not have? Where is the data?

Page 16836 Line 20- “Microscopy indicates possible. . .which could be epibionts”- this sentence is rather speculative

pag 16844 In this section the authors revise the current knowledge about the reproduction. No data or results are revised by the authors in what concerns *Bathymodiolus azoricus*, despite the existence of scientific papers from Dixon et al, 2006; Colaço et al; 2006 and Kadar et al, 2006.

Figures: Fig. 1. The names of the hydrothermal vents are not well placed. Rainbow is south of Lucky Strike and not North. There is the lack of the Moytirra vent field North of the Azores.

Also on the figure 1 caption is hard to understand. Authors shall use MAR- North to South; Med- East to West; GoM East to West; African Margin- North to South. This way the reader will understand better the figure.

Fig.3 is rather confusing, mixing gill filaments with gonads and juveniles from different species. This figure is not useful to the manuscript.

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