

Interactive comment on “Microhabitat and shrimp abundance within a Norwegian cold-water coral ecosystem” by A. Purser et al.

Anonymous Referee #2

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I think the density measurements of shrimps in CWC reefs is interesting and will help to show that these reefs are important in many aspects. In this respect the paper forms a significant contribution.

My main comment is that the text is often very wordy (too many words for saying things). So I hope the authors can make the text more concise, which will make the paper easier to read. The help of a native English speaker certainly will improve the text too. An example of superfluous text is in the Discussion: The start of the chapter and the first sentence of p. 3380 line 7-11 has a lot of overlap.

A more technical comment is that I miss an error calculation of the measured area seen (and the effect of the shrimp density measurements). Apparently no lasers were used during the videoing, or they were not used? In the methods it is mentioned

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that the image coverage was measured by assuming that *Lophelia* polyp dimensions had a diameter of 1 cm. It is not explained what the basis of this assumption was (real measurements of collected corals?), was it based on one polyp in each image (the biggest?) or on an average of a number of polyps? What about images without *Lophelia*. This should be explained better, and a calculation of the error in making this assumption should be given.

It is mentioned that very heterogeneous habitats had the highest shrimp densities. Could this also be caused by the fact that the surface area in these images was much larger (more relief, open space between dense corals), which could mean that had a larger surface where you could see shrimps?

Tropical coral reefs are mentioned. Are there any shrimp densities known from these tropical areas, and how do they compare?

In table 1 I miss the habitats "soft sediment" and "dead gorgonians" mentioned in the methods.

Can you indicate in Fig. 3 (detail) where the coral reef actually is. Is the whole area or only part of it?

Fig. 4: what are the 2 rectangles?

Interactive comment on Biogeosciences Discuss., 10, 3365, 2013.