

***Interactive comment on “Diversity, distribution and spatial structure of the cold-water coral fauna of the Azores (NE Atlantic)” by A. Braga-Henriques et al.***

**Anonymous Referee #2**

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General comments:

This is an excellent and thorough compilation of historical data on coral distributions in the Azores.

My main comments are regarding the treatment of the data. Did you record or approximate the spatial error associated with the locations? For example, the length of the trawl would give a spatial error associated with the given location. Did you exclude any records from your analysis because of uncertainty of location? What data quality checking did you perform.

Are your depth data based on the reported depths from the original source data, or are  
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they inferred from the location? These type of historic and bicatch data often report depth ranges (i.e. for long trawls). Please can you specify whether you used mid-point depths in these occasions. Again what quality checking measures did you perform on this data prior to analysis.

I find this an interesting analysis, but the question of the effect of sampling effort hangs over all of the results. This is made clear in the discussion. For example, it is difficult to interpret the diversity map of figure 4 without some measure of sampling effort. There is mention in the text of some poorly sampled seamounts. Its not clear on this map which these are. I'd be interested to see a similar map to figure 4 showing number of specimens, as a (admittedly flawed) measure of sampling effort.

Specific comments:

line 14: "nine of which", not clear on the meaning, is this nine new species observations for the area?

Methods:

pg 533, line 26: "individuals" -> "separate colonies"

pg 534, line 20-21: Were midpoint depths applied too?

pg 535, line 25: You give a reference for the seamount locations, but what about the other features?

pg 537, line 11: "good discriminating species" - poor english

pg 537, line 15: perhaps you be adding author names to the first use of each species names to be taxonomically rigorous.

pg 539, line 28: "D. aff. meteor" - it is not clear from the text to which genus this refers.

pg 540, line 17: I'm not sure I'd describe these distribution patterns as similar. There are lots of sites without Antipatharia samples. Perhaps similar centres of diversity is

better.

pg 541, line 1-2: Area of sampling is not the only difference between long line and trawl. The area of sampling does not account for the accumulation curve difference. Long-line bicatch is predominantly limited to larger specimens that easily 'snag'. Trawling will sweep up a wider variety of species. This is why the asymptotes of the two curves are at different levels.

pg 541, line 12-20: Have you considered reporting species per sample as a metric to correct for sampling effort?

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Interactive comment on Biogeosciences Discuss., 10, 529, 2013.