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Comment

Interactive comment on “Biostratigraphic evidence of dramatic Holocene uplift of Robinson Crusoe Island, Juan Fernández Ridge, SE Pacific Ocean” by P. Sepúlveda et al.

P. Sepúlveda et al.

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We would like to thank referee comments. His/her comments are followed by our response.

General comments 1) The use of biostratigraphy and sedimentology data makes the manuscript suitable for publication in the Biogeosciences venue, and its focus on a volcanic island fits well with the special issue (Geological and biological development of volcanic islands) where to it was submitted.

R: Our interpretation is based mostly on biostratigraphy and sedimentology so this special issue seems to be the best place.

C7575

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2) The authors should consider adding a paragraph or two to the Introduction where they would give a better overview on how volcanic islands generally behave in terms of subsidence/uplift (and add some more references). Referring to Darwin was nice, but this part is missing more substance to better support the overall discussion on different possible reasons for such an uplift taking place.

R: We agree with the reviewer. This comment is similar to that posed by referee #1 and we will modify this paragraph accordingly. While the merit of Darwin on his first report of vertical movements in oceanic islands is recognized, we will add additional processes that can act as drivers for such uplift.

3) Since most studies in the present special issue deal with the volcanic island of Surtsey, Iceland, it would be nice if the authors would make some link to it in their introduction/discussion. The Surtsey island has been subsiding (as most island volcanos) during the initial decades since emergence in 1963-1967: see e.g.: a. <http://link.springer.com/article/10.1007/BF00301116#page-1> b. http://www.surtsey.is/SRS_publ/2009-XII/low_res/2009-XII_039-047_Precision-lw.pdf

R: We agree with the reviewer. Because of the special mention of Surtsey we will add a sentence referring to it, and a comment about the most frequent case of subsidence of most of the islands with relevant references.

Specific comments: 1) P13611 – lines 23-26: This is not a separate paragraph as the text is structured. Merge with the above paragraph.

R: We agree with the reviewer; paragraphs will be merged.

2) P13612 – line 26: Your claim that “The bathymetry in fact seems to indicate a relative subsidence of this part of the oceanic crust” would be stronger if you could supply some original reference with it...is Becker et al. 2009 the only possible reference??

R: This comment is similar to that posed by reviewer #1. We modified this sentence as explained before. At a regional scale there is no better reference for the bathymetry

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where large-scale anomalies can be observed. However we will add a reference for an integrated analysis of geophysical data that describes the general architecture of the ridge and the surrounding lithosphere (Rodrigo and Lara, 2014).

Interactive comment on Biogeosciences Discuss., 11, 13605, 2014.

BGD

11, C7575–C7577, 2014

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Discussion Paper

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