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Professor Nigel Stallard
Editor
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Dear Professor,

On behalf of myself and my coauthors of JRSS-OA-SC-May-16-0104 I would like to thank the editorial team of JRSS-C for their consideration of our revision.

We have made all of the final changes suggested by the referees and the Associate Editor. Detailed responses to the Associate Editor's and reviewers' comments are attached to this letter, and the revised manuscript is also enclosed.

We are very grateful for the careful reading of our revision and are indebted to the referees and editors of JRSS-C. Once again we thank the editorial team and both reviewers for their feedback and excellent critique.

Kind regards,

Amy Willis

Referee 1

- *The authors did a thorough revision of the manuscript and addressed all the points adequately. As a result, I am very happy with this new revision. I only found a few sentences that had some awkward phrasing and one minor remark, all outlined below.*

Thank you for carefully reading our revision. We completely concur with all of your suggestions, and have noted the changes below. We are very grateful and thank you for your time spent reviewing.

- *Awkward phrasing: lines 233-235*

We agree. We have changed the sentence to read “The method’s performance under negative binomial simulation structures is not shown here due to the limited ability of this distribution to reflect microbial data structures.”

- *Awkward phrasing: lines 276-277*

We concur, and have opted to break the offending sentence into 3 separate sentences. We have deferred mention of regression on Chao1 to a footnote, and mention at the end of the paragraph that we model `breakaway` estimates for the high-diversity case and `CatchAll` for the medium-diversity case.

- *Awkward phrasing: lines 484-486*

We again agree, and have clarified the sentence to read “When this variability is accounted for, richness differences that are small compared to the precision in estimation are correctly detected as attributable to sampling variability.”

- *In lines 281, 291 and 435 there is mention of specific sample numbers, but it was not clear to me what those samples are referring to, perhaps a short sentence explaining this will be beneficial as it comes to a bit of a surprise in the manuscript as it currently stands.*

Indeed, this was very unclear. In the first instance, we are referencing a sample for which the `breakaway` estimator did not converge, and for transparency reasons we believe that we should clearly state which sample that was. Thus we have added a note referring the reader to the Supplementary Data, where this sample is clearly labelled. In the second two instances we were merely stating which sample we were mimicking in the simulations. For clarity, and to concur with your suggestion, we have omitted the sample number and merely refer the reader to the Supplementary Data and Materials.

Thank you again for your suggestions and sincerely believe the paper is vastly better because of them.

Referee 2

- *The authors have dealt extremely thoroughly and satisfactorily with the comments that I*

raised in my review, and I am happy with the revised version of the manuscript. I think there are only a couple of trivial edits to wording that need to be made to the latest draft.

Thank you very much for your helpful suggestions and for your thorough reading of our revision. We are only too happy to accept your suggestions.

- *Line 60: "made possible" should be "is made possible"*

Thank you, we have added the missing "is."

- *Line 67: "realistic estimates of" would be better expressed as "a realistic assessment of"*

Agreed. We have changed the sentence accordingly.

- *Page 4: I find it a bit confusing that the first footnote continues across two pages; this makes it quite hard to read*

We have altered the formatting to include a long footnote. However, this is a typesetting decision, and I expect that the copyediting team at JRSS have their own protocol for formatting footnotes. Thus we apologise if the final manuscript does not appear exactly as our revision.

We appreciate your very constructive suggestions and are very grateful for your review. Thank you for seriously considering our manuscript and taking the time to carefully review it. It has been much improved by your suggestions.

Associate Editor

- *This paper has been well-revised incorporating the requests of the two referees and myself. The referees have very minor recommendations for a final edit but I have no further requests.*

Thank you very much for your consideration of our revision. We have made all of the changes suggested by the referees and hope that you find this satisfactory. We are very grateful for such thorough reviews by all parties involved.