

Laura Cowen
Department of Mathematics and Statistics
University of Victoria
Victoria, BC
Canada V8W 3P4
lcowen@uvic.ca

December 20, 2019

Ecology and Evolution

Dear Editor,

We would like to thank you for accepting our paper with minor revisions. We would like to submit revisions to the manuscript previously entitled “Complete tag loss in capture-recapture studies affects abundance estimates: an elephant seal case study”. We have responded to Reviewer comments in point by point form below.

Regards,

Laura Cowen, Emily Malcolm-White and Clive McMahon

Response to Reviewer Comments

Associate Editor Comments

We have renamed the “Supplementary Materials” to Appendix.

line 97: changed “supplementary material” to “Appendix”

line 189, 199, 258, 279: changed “Online Supplement” to “Appendix”

line 308: changed “Web Appendix A” to “Appendix”. (Note this sentence is now line 303).

Reviewer 2 Comments

1. *Line 69 Correct souther to southern. Also, I would simply put (Figure 1) after southern elephant seals.*

Done.

2. *Line 83 Correct up to the first time see to up to the first time seen.*

Done.

3. *Line 118 Delete both because three variables are listed.*

Done.

4. *Figure 3 In the caption it lists three survival probabilities ($\phi = 0.2, 0.5, 0.9$), but only values of 0.5 and 0.9 are shown in the figure (right side panel labels). The text that highlights Figure 3 explains why the results for $\phi = 0.2$ are not shown, so I would just remove 0.2 from the caption.*

Done.

5. *Lines 306–307 Where the text states Standard error estimates are also higher when recycled individuals are included in the analysis I assume it is still referring to tag retention, capture, and survival probabilities from the preceding sentence (i.e., those shown in Table 2). But (at least to the third decimal place) the SE values are the same for ϕ , p , and whether recycled individuals are included or excluded in Table 2. The SE values are higher for estimates of abundance (N_t) when recycled individuals are included however. This makes me think the statement on lines 306–307 is meant to refer to abundance and should be moved to the previous paragraph (lines 297–302).*

This is correct, we are referring to the abundance estimates. We have moved these two sentences to line 302 in the paragraph above. We also clarified this sentence by add “for \hat{N}_t ” after “Standard error estimates”.

6. *Line 331 I have not seen the word unbiased used before, I suggest rephrasing this statement. I wonder if this is meant to read As expected, the survival estimates are unbiased when recycled individuals are excluded. Later in this paragraph the text states that the biases in the numerator and denominator cancel out, which makes me think the first sentence is intended to highlight that survival estimates are not*

biased? Either way, I suggest giving this section one more close reading to ensure that the intended meaning is conveyed.

This is a typo. Changed to “typically unbiased”.