General comments from Nicolas BECH

Dear authors,
Thank you very well for responding to all the reviewers' comments. The manuscript has been significantly improved and requires only minor suggestions for changes. These suggestions are listed by the reviewers below.

If you decide to revise the work, please submit a list of changes when you submit the revised manuscript.

Yours sincerely.

Our answer:

Dear Nicolas Bech,

We are very happy to have received a positive evaluation from you and the two. We appreciated the two reviewers' valuable comments, which helped us to further revise and improve the manuscript. We agree with all the comments made by the two Reviewers, so we paid heed to all of the reviewers' advice and suggestions and made every effort to address them.
We detailed below point-by-point responses to the two reviewers' comments. The corresponding revisions are highlighted into the revised manuscript by using the track changes mode of Word.
We hope that our revised manuscript is now suitable for being recommended for PCIEcology. We look forward to hearing from you.
Yours sincerely,

For the authors,
Cécile Vanpé

Review by Romain Pigeault

Dear Cécile Vanpé and collaborators,

Thank you for addressing all the comments in such detail. The manuscript now contains additional information very helpful to fully understand your study. I only have a few, minor suggestions for changes.

Our answer: *We thank the reviewer for his positive evaluation of our manuscript.*

1) Many sentences are very long and sometimes difficult to understand. I suggest to rewrite some of them in order to facilitate the reading. (e.g., Page 7, Lines 3-6 ; Page 7, Lines 19-23 ; Page 8, lines 8-13 ; Page 9, Lines 13-17)

Our answer: *We have now rewritten these long sentences and splitting them in two sentences (see p. 6, l. 15-22, p.7, l. 2-8, p. 8, l. 8-15) except the useless sentence from page 7, lines 3-6 that we decided to remove (see p. 6, l. 1-4).*

2) Page 3 lines 18-19: I am not convinced that it is necessary to indicate these values in the abstract.

Our answer: *We agree with the reviewer and we have now removed useless values and rewritten the sentence as follow: "Annual population size increased fivefold between 2008 and 2020, going from 13 to 66 individuals" (see p. 1, l. 18-20).*

3) Page 3, lines 25-26: I suggest removing the second part of this sentence (isn't a lower survival rate de facto related to a higher mortality rate ?)

Our answer: *We have now rewritten the sentence as suggested by the second reviewer Tim Coulson: "We also found that cubs had a higher mortality rate than adults and subadults, because of infanticide by males, predation, maternal death, or abandonment" (see p. 2, l. 25-26 and p. 3, l. 1-2).*

4) Page 4, line 3, please remove one "and".

Our answer: *We apologize for this typo and we have now removed one "and" (see p. 3, l. 3).*

5) Page 17, line 19. In the current form we don't quite understand what effects are being tested. Maybe this sentence should be reworded.

Our answer: *We have now rephrased to clarify, as follow: "We first used a frequentist approach fitting 24 different models in total to estimate detection, survival and emigration parameters" (see p. 15, l. 5-7).*

6) Page 24, line 18. I suggest removing the word "and" at the beginning of the sentence.

Our answer: *We have now removed the word "and" at the beginning of the sentence (see p. 21, l. 3).*

<u>Review by Tim Coulson</u>

I think the authors have done a good addressing my concerns. I have provided a marked-up version of their paper, with some editorial suggestions. There is also a paragraphy about Bayesian methods in the introduction that is rather out of place. Perhaps remove it? It could be moved to the discussion, where it would be more appropriate, and used to justify the choices made when analysing the data.

This is a good paper that will doubltless be well-cited. I look forward to seeing it published. Perhaps even in Peer Community Journal!

Our answer: *We acknowledge the reviewer for his positive evaluation of our manuscript and his useful comments and meticulous reading of our manuscript. We have now taken into account editorial suggestions and moved part of the paragraph about Bayesian methods from the Introduction section to the Materials & Methods section (see p. 15, l. 19-23) and decided to remove the other part (see p. 6, l. 1-4).*

And yes, the plan is definitely to go for Peer Community Journal!