Dr. Sofia Consuegra

Academic Editor

PeerJ Editoral Office

May 3, 2015

RE: Manuscript 2015:01:3766:0:0

Dear Dr. Consuegra,

Please find attached a revised version of our manuscript, “Genetic approaches to the conservation of migratory bats: a case study of the eastern red bat (*Lasiurus borealis*)”, for publication in PeerJ.

All revisions are recorded in the ‘tracked changes’ version of the manuscript. We hope that the revisions in the manuscript and our accompanying responses will be sufficient to make our work suitable for publication in PeerJ.

We thank you for your time and look forward to your reply.

Best Regards,



Maarten Vonhof, Ph.D.

Department of Biological Sciences

Western Michigan University

Kalamazoo, MI 49008-5410 USA

**Response to Editorial Comments**

**Both reviewers consider, and I agree with them, that the reviewed manuscript has been considerably improved. The authors have made a very good job in addressing all of the comments and the reviewers have now only a few minor comments left to be addressed. Please pay particular attention to the comments of Reviewer 1 about the missing references and the map and consider the suggestions from Reviewer 2. I am a bit surprised that the sequences have not been submitted to Genbank yet, mainly considering that an embargo period is possible to ensure that they are not made public before the article is published.**

Response: Thank you for your comments. We have added the Genbank accession numbers to the manuscript and Table S1.

**Responses to Reviewer Comments**

**Reviewer 1 (Anonymous)**

**Comments for the author**

**The manuscript has made substantial progress. It now reads well throughout, including in the methods section which has now been reorganized. I recommend this article should be accepted and offer only a few minor comments below.**

**1. In lines 416 & 417 of the discussion (sentence on previous phylogeographic studies), perhaps include the references in line 414 when they are first referred to, rather than in the second sentence**

Response: We made the change as suggested.

**2. The references in line 511 are missing from the references section at the end. Baerwald et al., 2014 and Voight, et al., 2012.**

Response: We added the missing references.

**3. The map in Figure 1 has a strange "extra" island associated with eastern Canada. It is just off the island of Newfoundland to the southeast and has a very linear geography - perhaps it is associated with a marine zone of some sort?**

Response: We thank the reviewer for catching this mistake in the figure. We have fixed this error in the newly submitted figure 1.

**Reviewer 2 (Anonymous)**

**Comments for the author**

**The authors have addressed the reviewer’s comments and concerns. I particularly appreciate the change in title and the focus on clarifying the methods. I never doubted the methodological approach for utilizing different datasets I just was never clear on the how or the why of the allocation of data amongst the analytical approaches. The revised manuscript addresses the confusion and is succinct in the description of why datasets were divided and how that was accomplished.**

**Further, I want to be clear that I never doubted the contribution of this work to the body of knowledge required to begin to build appropriate management strategies for the effects of wind power on this species. Rather, I felt the argument, as presented, was unconvincing. The revisions have corrected this issue in my eyes and strengthened the connection between the work and our need to manage the effects of wind power fatalities for this species. We now know our management units are quite large and that it will be difficult to see an effect immediately but that does not alleviate the possibility that it might be a significant impact on these populations before we can ever detect it through genetic methods. I appreciate the effort the authors put into addressing my comments even though they did not appreciate my perspective.**

**Minor comments:**

  4. **Lines 107-112- nice connection, thank you.**

Response: None required.

**5. Lines 112-129 nice clarification, thank you.**

Response: None required.

**6. Line 132 remove first “of”**

Response: We made the change as suggested.

**7. Lines 134-140 Much clearer now, thank you.**

Response: None required.

**8. Lines 142-145 this provides clarity but seems to be misplaced. How about moving to line 206?**

Response: We added these statements in response to this reviewer’s comments in the first review, as a means to clarify which data were used in each set of analyses. We would prefer to leave the statements where they are, as they provide the context for the laboratory methods, and placing the language at the end of the section (line 206) would reduce the effectiveness of providing the overview.

 9. **Line 174 and Lines 188-189 why use two different clean up approaches? Were these done in different labs? It may not be critical to state but it did make me wonder…**

Response: The reviewer is correct, the different clean up approaches were done in different labs (mitochondrial sequencing was carried out in the lab of MJV, sequencing and cloning of CHY was carried out in the lab of ALR). We are unclear as to why using standard clean up approaches in different labs would cause the reviewer concern. We don’t feel it is necessary to state in which lab various procedures were carried out, but are happy to add this to the manuscript if the editor so wishes.

**10. Line 241 are pre-defined sites the 12 from line 129?**

Response: Yes they are. We clarified the language in this statement:

“The level of genetic differentiation among pre-defined sites (*N* = 12; Table 1) based on microsatellites was determined by calculating pairwise distance measures,…”

**11. Line 242 and lines 249-250 I think these sentences are repetitive.**

Response: The two statements separately refer to analysis of microsatellite vs. mitochondrial DNA. Our clarification of language for comment 10 helps to address this confusion.

**12. Line 269 perhaps add “(see results)” after “red bat population”.**

Response: We made the change as suggested.

**13. Line 385 estimates from HV2?**

Response: We added “using HV2” to this statement as requested.