






Peer Review: How to avoid the camera trap: the effect of camera settings on occupancy analysis and photo data workload

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Collaborators: Bryn Evans, Mason Fidino + 1 other reviewer

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Accepted by 2 of 3 reviewers

Conflicts of Interest

The authors have no conflicts of interest with the research and results in this manuscript.

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Reviewer Summaries

Bryn Evans

Initial Submission

Do you have any conflicts of interest that could bias your ability to provide an independent review?

No

What did the authors do a good job with?

This is a great use of existing data to answer a self-contained but widely application issue in camera trap wildlife research. The authors explain the pros and cons of collecting large image datasets well, and take a simple but effective route to demonstrate the positive outcomes of reducing raw image collection

How do you think this research will contribute to the field?

I think that many researchers will continue to collect (mostly unnecessarily) large image datasets just "in case" they may want to use other analytical frameworks or address questions about behavior, etc, but this paper will help justify the savings in time, money, and environmental impacts of excessive data storage for researchers that DO want to cut back

Regarding the study design and methods, what do the authors need to fix or improve upon to be fit for publication?

The authors appropriately cite the original studies for which the data was collected and do a good job of explaining the statistical methods for this paper

Regarding the analysis and interpretation of their findings, what do the authors need to fix or improve upon to be fit for publication?

As other reviewers have mentioned, the authors need to revisit the analyses and interpretation to reduce pseudo-replication, but I think from the clarity of the results right now conclusions won't change much. They should add one attentional caveat in the Discussion that the lack of any real loss in precision of estimates ONLY applies for occupancy studies, where detections are collapsed into 24-hour (or longer) bins

Is there anything else you think the authors need to fix in their article to be fit for publication?

Please update the map to be reader-friendly

Do you have any concerns about the ethics of this research?

No, I personally do not, the authors could mention concerns around bait if they so choose

Do you believe the article, in its current form, is fit for publication?

This paper requires minor revisions but does not need further peer review

Revised Submission

Do you have any conflicts of interest that could bias your ability to provide an independent review?

No

How well did the authors respond to your comments?

5/5

What - if any - feedback do you feel the authors did not adequately respond to?



The paper has been edited to present the key points concisely and address the initial reviewer comments

Based on your review, what should happen next?

This paper requires minor revisions but does not need further peer review

Would you like to be listed as a Collaborator on the final publication?

Yes, please list me as a Collaborator

Mason Fidino

Initial Submission

Do you have any conflicts of interest that could bias your ability to provide an independent review?

no

What did the authors do a good job with?

This may be one of the largest datasets used to evaluate the effect camera settings may have on occupancy analyses. When combined with the fact that they also can apply this analysis to rare species (given their sample size) makes this even better.

How do you think this research will contribute to the field?

Depending on the results, this research can help encourage others determine the lowest burst setting and highest delay period that could be used (while also not influencing occupancy estimates). This, in turn, could help increase photo processing substantially, meaning that conservation action and the like could happen faster.

Regarding the study design and methods, what do the authors need to fix or improve upon to be fit for publication?

This is the largest issue I had with the research. As I brought up in comments, the current analysis does not correctly evaluate the influence of camera settings on occupancy. The authors generated a bunch of independent datasets but then combined them and analyzed them together. What needs to be done instead, as I outlined in my comments, is to compare parameter estimates across independent model fits. When increasing delay period, how do the occupancy and detection parameters vary? Does the standard error increase as more data is filtered out? These are the types of questions that need to be addressed in this research.

Regarding the analysis and interpretation of their findings, what do the authors need to fix or improve upon to be fit for publication?

My previous comment covered most of this. In all likelihood the entire analysis should be redone, the results updated, and then depending on those updated results, the discussion may need to be changed as well.

Is there anything else you think the authors need to fix in their article to be fit for publication?

I did enjoy reviewing this paper, the biggest issue was simply how the data were analyzed. Once that is dealt with I think this will be a fantastic contribution to our understanding of how camera settings may influence occupancy analyses.

Do you have any concerns about the ethics of this research?

no

Do you believe the article, in its current form, is fit for publication?

This paper needs major revisions and another round of peer review

Revised Submission



Do you have any conflicts of interest that could bias your ability to provide an independent review?

No

How well did the authors respond to your comments?

4/5

What - if any - feedback do you feel the authors did not adequately respond to?

I would say that the authors actually did a very adequate job of responding to the comments I had.

Based on your review, what should happen next?

This paper requires minor revisions but does not need further peer review

Would you like to be listed as a Collaborator on the final publication?

Yes, please list me as a Collaborator

Phoebe Parker-Shames

Initial Submission

Do you have any conflicts of interest that could bias your ability to provide an independent review?

no

What did the authors do a good job with?

The concept for the study is great! It is both conceptually interesting and directly practically useful. They have a great dataset to test out their questions. The writing is clear and easily readable.

How do you think this research will contribute to the field?

I will personally use this paper to help guide my camera settings in the future! I think a lot of people probably will as well. And if the new recommended approach works out well it provides a framework to test a lot of other camera effectiveness questions.

Regarding the study design and methods, what do the authors need to fix or improve upon to be fit for publication?

Unfortunately, they need to redo the methods. The current approach is not statistically sound. I think together the reviewers have provided some helpful guidance on how to redo the analyses in a way that is stronger and more sound.

Regarding the analysis and interpretation of their findings, what do the authors need to fix or improve upon to be fit for publication?

Much of this will be re-written with the new modeling approach. They will still need to be careful about conflating model fit with covariate importance -- AIC will not decide whether delay or bursts matter.

Is there anything else you think the authors need to fix in their article to be fit for publication?

I think we've already recommended some pretty big fixes so that would be what I would focus on for now.

Do you have any concerns about the ethics of this research?

No

Do you believe the article, in its current form, is fit for publication?

This paper needs major revisions and another round of peer review

Revised Submission

Do you have any conflicts of interest that could bias your ability to provide an independent review?



no

How well did the authors respond to your comments?

4/5

What - if any - feedback do you feel the authors did not adequately respond to?

I think they generally responded well to the first round of feedback, though there were some places they declined to make recommended changes (which is fine) but I would've liked them to then make adjustments to the language or discuss in limitations if they weren't making changes.

Based on your review, what should happen next?

This paper needs major revisions and another round of peer review

Why is this article not ready to be published?

It's still relatively minor but either reviewers or an editor should check to make sure it is updated as requested, I realized there are some potential limitations to the methodology that needs to at least be acknowledged

What do the authors need to change for you to accept this article for publication?

I want to see more clarity in the methods section, particularly in seeing the actual equations written out for reproducibility and better understanding. I would also like them to expand the limitations section. I encourage them to think about practical applications of this research and to give specific recommendations for future study design. I don't know that it really needs another set of reviewers looking at it as long as an editor checks that they do make the recommended changes from this round.