Review of: "Compact, Consumer Off the Shelf Remotely Piloted Aircraft Systems (COTS-RPAS) in Observing Haliastur indus, the Kali, or Brahminy Kites"

Matt Stevens

Potential competing interests: No potential competing interests to declare.

I enjoyed reading the manuscript entitled “Compact, Consumer Off the Shelf Remotely Piloted Aircraft Systems (COTS-RPAS) in Observing Haliastur indus, the Kali, or Brahminy Kites” in which the author demonstrates some potential applications of RPAS in bird behavioural observation studies.

Overall the manuscript succeeds in highlighting some of the benefits and applications of this technology and provides interesting examples of the behaviours of Brahminy Kites which would otherwise be difficult to obtain. The manuscript also includes some suggestions for potential users of this technology re. minimising the impacts on the behaviour of target species but misses an opportunity to highlight (and counter) some of the potential issues and problems in using this technology for this purpose (see below).

On the basis that the work provides a useful record of a field study in the use of COTS-RPAS for monitoring bird behaviour, particularly for larger species, I feel that the manuscript merits publication with some modification.

Some specific comments:

- The opening paragraph of the introduction, or something similar, would be better placed at the end of the introduction to lead the reader into the main part of the manuscript.
- Since this manuscript is mostly focussed on the methodological approach and the utility of the RPAS, there is no need for Figure 3. No hypothesis is being tested here regarding habitat use by the kites and so, aside from the potential impacts on manoeuvrability of the RPAS, habitat detail is almost irrelevant - unless the author has additional information or observations to include relating to the utility of drone use in/over different habitats.

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- Identify here what measurement is being used (presumably bird length). Is this likely to be similar to the length of the drone with propellers? Given that the wingspan of Brahminy Kites is likely to be 100-125cm, this would make the bird seem considerably larger than the drone and therefore, potentially reduce any perceived threat (or modify bird behaviour). Might it be worth commenting on the potential behavioural responses of smaller species?
- Give the dimensions (L x W with propellers) of the two RPAS being used to enable the reader to visualise the relative size of the bird and drones.
- Identifying whether or not the birds view the drone as non-threatening is necessarily subjective but some additional

references here about the lack of impact of using RPAS in other studies might be useful.

- *"Some Kali juveniles are even documented flying closer to COTS-RPAS out of curiosity."*- If these incidents are documented, can you include citations for them?

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- Is the 20m 'safe distance' mentioned here based on your experience of reactive behaviour by the birds? Or is this merely a best-guess suggestion based on what you perceive to be a suitable safe distance? This 'safe distance' will vary according to the species under study, or the time of year, the behaviours that the focal animal is engaged in or the habitat where the study is being undertaken (e.g. open, closed, rural or urban)? Similarly, although the target animal may not show any behavioural response to the presence of the drone, did you encounter any responses of other animals present (which could influence the behaviour of the target)? While addressing all of these points is unlikely to have been the purpose of the manuscript, pointing them out for the reader to consider would show an open and unbiased consideration of the use of this approach and may encourage others to explore potential impacts.

Other comments

- The QR codes included with the figures do not work.
- Remove the cartoon American Football bird included in Figure 8 – it is unnecessary and gives the impression that this is not a serious piece of work.
- The English throughout the manuscript is generally very good, however, there are some areas in the text where the author's intended meaning is obscured by the language used. I would be happy to assist with this, if he feels it would help.

Lastly, I wish the author good luck in updating his manuscript and I look forward to reading more of his work.