The central goal of this study entitled “The effects of parental age difference on the offspring sex and fitness of European blackbirds” was to examine sex ratios in relation to laying sequence within a clutch. By monitoring the breeding pair and their brood daily the authors were able to collect a multitude of data. However, the authors found that in their population of European blackbirds, placement within laying sequence were not significant in sex determination. The ratio of sexes in offspring was not statistically different from 50:50. The authors concluded that due to the fact the European blackbird population in this study are monogamous, a sex ratio of 50:50 is the rule.

The authors also wanted to test the possible impacts of parental age on offspring sex. I was excited to see that this portion of the study provided thought provoking results. It was found that age differences between parents could affect the sex ratio of offspring. When the father was older than the mother, the likelihood of producing sons was higher. Whereas, when the mother was older than the father, the likelihood of producing daughters was higher. In addition, when the mother and father were the same age, the was no difference in the occurrence of offspring sex. As the father’s age increased the sons’ annual reproductive success increased, but no such relationship was found with his daughters. The authors included in their discussion that father’s older than six years old were likely to produce sons with decreased breeding success due to the cost of senescence.

I enjoyed reading this manuscript and found it to be straightforward and well-written. The introduction covered much of the traditional theory of sex allocation clearly and concisely along with providing newly found aspects from the field. The sample size is ample with 382 Blackbird offspring included, and the statistical analyses are appropriate for this study. I appreciate the fact that the authors included studies that contradict their findings and provided explanations for the discrepancies.
This study helps to reinforce the idea that birds have the ability to skew the sex ratio of their broods dependent on heritable traits. I look forward to exploring other studies produced from this study system. With that I have found myself with just a few questions and suggestions about certain aspects of the manuscript.

Main comments:

1. Lines 50-52: The statement is presented as fact but should include supporting references.
2. Line 116: There should be a citation for the inference that older females should produce more daughters owing to their poorer condition caused by accelerated senescence?
3. Lines 266 -267: There is a reference to old males. Could you define “old” in relation to this population in the introduction when describing the species? How long do European blackbirds live?
4. Line 224: I suggest including the specific years this study was conducted. In the methods section (line 129) it is stated that the population was studied from 1996-2017. It

is a bit confusing to include the length of time the population was studied overall, but not include the specific years the data for this manuscript was collected.

5. A more extensive list of literature would greatly enhance the relevance of the paper to a larger group of scholars.
    a. Lines 112-114: A reference to Weatherhead & Robertson 1979 would be appropriate here.
6. Mass at fledging as a proxy for hatching order can be problematic especially if male nestlings are more sensitive to sibling rivalry than female nestlings (Bowers et al. 2011, 2015). If it is necessary to use mass at fledging to determine hatching order then using relative laying order (positions in the sequence) divided by the number of siblings within the brood. When using this method, the last-laid eggs are treated similarly in broods of various sizes.
7. Inference from the hatching sex effects data are limited. I think that removing this portion of the paper and perhaps developing a discussion about paternal and maternal quality would improve the focus of the paper greatly.
8. The references throughout the manuscript are from papers that study various species of birds. It would be helpful to only include species that are similar to the European blackbird's either breeding strategy, within the same family, or at least closely related. If the authors wish to include all the references, a justification for the use of those references, (i.e. that particular bird species) should be included to justify use of the paper in the manuscript.

Minor comments:

Line 7: Perhaps use many or multitude instead of "plenty of".
Line 55: Change "prefer sons from" to "produce sons with".
Line 97: This line should also include the fact the first chick experiences less competition since it hatches first along with the fact that it is fed first. It seems to be an obvious addition, but pertinent to include.
Line 98-99: Perhaps reword "We also wanted to test whether other brood characteristics, like hatching and clutch order, since the beginning of the breeding season could influence the sex ratio."
Line 101: "That this should be so is because" should be replaced with "This should be so because"
Line 104: There should be rewording of the phrase to "where the impacts of natal condition can be profound later in life" .
Lines 117-118: A description of what accelerated senescence is. How can senescence be accelerated?