

To: Nurit Rozman,

Faculty of Life Sciences, Tel-Aviv University,

I have carefully read the new version of the thesis of Itai Berger. While I find that some efforts were made to improve the dissertation, I find them to be superficial and unfortunately, I cannot approve the work for the purpose of awarding the doctor of philosophy degree to Itai Berger. The objective section is still poor, chapter 1 still lacks a synthesis of the findings of this review, which question its contribution as a PhD chapter (it is more like expanded literature review that should come as part of the introduction). There are still some major issues with the analysis of chapter 2 and 3, which prevent me from assessing the robustness of this work and even after reading the expanded conclusion / discussion section I do not manage to see the novelty of this work, and as far as I see not papers were yet published from this research. Most of these issues were flagged in the previous round of the comments and at this stage I would not agree to review this thesis again. I specify the main problems below and hope this can help Itai to improve its thesis and bring it to an adequate standards of PhD dissertation.

A brief objective section was added to the introduction and a detailed research outline section. These two sections improve the quality of this dissertation and makes it easier to understand the general picture. Yet, the objective section is poor, and it raises one objective which is very limited in scope: "I sought to investigate whether the mere presence of an invasive species can influence the behavior of a native species". This question is not well rooted in invasion theory and seems very specific. I expected to see one general objective that highlight the scope of the research and its novelty and at least three specific questions (one for each chapter) and related hypotheses. This remains a limitation of this dissertation.

Chapter 1 was improved, and an objective section was added, as well as a discussion section. However, this chapter still reads as a long list of examples and the discussion provide limited synthesis and it does not seem related the literature (not even one citation). At the end of this chapter, I did not manage to get an overview on "how invasive species may change the behavior of local species". I was also not convinced that "understanding behavioral change can help to understand the ecological impact of invasion". A synthesis is still missing and much of the examples given in this chapters are not related at all to the objectives of this chapter. This is one of three chapters of the thesis and for my opinion it should stands on its own and provide some theory rooted synthesis and novel insights. At its current stage it does not meet my standards of a thesis chapter.

The methodology of chapter 2 is much improved, I find it cleared now, and related to the objective section that was added. However, still there are some analyses that were not mentioned in the data analysis section (e.g. Mann-Whitney U test: $p=0.008$ in page 72 and others). Unfortunately, there is still no discussion of the potential biases and limitation of the experiments as suggested before.

In Chapter 3 objectives and hypotheses were added (which is essential for an experiment), although there are still no objective or hypothesis about the differences between females and males.

Unfrequently, the methods for this chapter are still very weak: and at it is impossible to determine whether the analysis is sound. In experiment 1 it is not clear how the decoy bird was placed and changed during the experiment, and I think this could bias the results. It is also not clear how did the dependent variables were measured and calculated; how many repetitions were made for each nest and at which time of day (as I previously flagged). I am also still not sure what is the sample size, how many time each experiment was replicated in if so, why there was no control for dependency? The latter is really concerning as the analysis presented MANOVA does not account for repeated

measures. If there are no repetitions than the sample size ($n=9$) is too small for MANOVA and if there several repetition per nest, then the whole analysis is wrong as it should account for the dependencies between measures from the same nest. Finally, in the results section t-test and Mann-Whitney Test are mentioned for experiment 1, while it is not mentioned in the methods, so I am still not sure what was done. The discussion of this chapter starts with flagging two key limitations, for experiment 1, these are flagged but not discussed in relation to the results. I am also concerned about the fact that in experiment 2 sparrow could not see the myna, but they could hear them. Again this potential limitation is not discussed.

The conclusion section was expanded, yet most of the text is not related to the objective, it does not make a synthesis of the findings in relation to the objective. Instead, the first two pages repeat statements that were said in the introduction and in the chapters. They followed by short description of the results and future directions and then there is a general discussion about invasion biology and conservation (not related to the thesis itself). I am still missing a synthesis of the results that will highlight the novelty of this PhD dissertation, in relation the exiting literature. I also think that some important applied lessons could be raised based on this work, but there are still not developed in the conclusion section.