

Dear Reviewer:

Thank you for your comments concerning our manuscript entitled " Meta-Analysis and MaxEnt Model Prediction of the Distribution of the *Phenacoccus solenopsis* Tinsley in China under the Background of Climate Change" (insects-3186856). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our research. We have studied the comments carefully and have made corrections which we hope to meet with approval. The main corrections in the paper and the response to the your comments are as flowing:

For Reviewer 2

Minor comments,

Comments 1: [In my opinion, the way the species name is written is incorrect. It should be *Phenacoccus solenopsis* Tinsley not *P. Tinseley*. The shorten version of species name should be:*P. solenopsis*.This should be corrected in the whole text.]

Response 1: Thank you for pointing out our mistake. We have corrected all instances of "*P. Tinseley*" to "*P. solenopsis*" throughout the entire text.

Comments 2: [Please add author's name to all species name in the text.]

Response 2: Thank you for pointing this out. We have added the author names after the species names.

Comments 3: [A serious mistake is the lack of species affiliation. Phenacoccus

solenopsis belongs to the family Pseudococcidae, superfamily Coccoidea, suborder Sternorrhyncha and order Hemiptera. Information about species systematic placement should be added.]

Response 3: Thank you for pointing this out. We have made a revision on line 41 of the revised manuscript, adding the species information for the cotton mealybug. The added content is: "*P. solenopsis* belongs to the family Pseudococcidae, superfamily Coccoidea, suborder Sternorrhyncha, and order Hemiptera."

Comments 4: [I think, that the sentence is not clear: The *Phenacoccus solenopsis* poses a serious threat to global crops, and controlling climate change has become a crucial strategy. The first part and the second part of the sentence are not related to each other.]

Response 4: Thank you for pointing this out. We have revised line 18 of the abstract in the revised manuscript. We removed "and controlling climate change has become a crucial strategy" and modified the first sentence to: "The *Phenacoccus solenopsis* Tinsley is a pest that poses a significant threat to agricultural crops, especially cotton, and is now widely distributed across many regions worldwide."

Comments 5: [This sentence is incorrect: Its secretions can induce sooty mold, which hinders photosynthesis and may cause leaf detachment, and in severe cases, plant death. The honeydew is not secretion, but it is excreted by e.g. scale insects, so it is a waste product.]

Response 5: Thank you for pointing this out. We have revised line 53 of the manuscript to: "Its honeydew can induce sooty mold, which hinders photosynthesis and may cause leaf detachment, and in severe cases, plant death."

Comments 6: [Information about distribution of *Phenacoccus solenopsis* should be added.]

Response 6: Thank you for pointing this out. For the current distribution information of *P. solenopsis*, we have included a description in line 346 of the revised manuscript and provided data visualization in Figure 6. Additionally, the distribution point data we collected is published in line 494 of the revised manuscript.

Comments 7: [The chapter "References" was prepared carelessly. Authors' names and titles should be written according to one pattern. This chapter needs to be improved.]

Response 7: Thank you for pointing this out. We apologize for the oversight during the submission process and have revised the references section according to the journal's requirements.

Best regards,