

Reviewer's Report on the Habilitation Thesis

Title: Tropical insects: Diversity and interactions with other organisms

Candidate: Robert Tropek, Ph.D.

Reviewer: assoc. prof. Pavel Drozd, Ph.D.

The presented habilitation thesis summarizes 15 years of candidate research on tropical insect diversity. It perfectly reflects the wide scale of candidate activities in the field of tropical insect biodiversity, from taxonomy of selected African taxa of Lepidoptera through diversity studies of temporal and spatial patterns of arthropods to plant-pollinator interactions. I cannot resist to highlight a very fresh, informative, and original introductory part including dedication to prof. Žďárek, amazing acknowledgement to parents, or very relevant quotes by A. R. Wallace, E. May, and R. A. Henlein. Also, the epilogue is great. Surprisingly, it is the introduction of the play Pictures from the Insects' life written by the Brothers Čapek (not only Karel). The most substantial part of the introduction contains three sections according to the three main topics of the fifteen selected research articles of the candidate (authored or coauthored). It is important to mention that all sections are written very impressively and highly readable. Based on the Turnitin similarity report, there are no significant matches with other sources.

All the papers included in the thesis are mainly focused on the Afrotropical region or African samples are used for the comparative study. They are well written, with conclusions greatly supported by large datasets, statistical analyses, and original graphical outputs very often. The significance of the articles for entomologists and ecologists (and also journal score measured by IF or AIS) vary widely, from basic taxonomic studies published in relatively "low impacted journals" to very interesting and complex latitudinal study where the authors have shown the importance of the bottom-up limitation of arthropod abundances (published in Ecology Letters). I really appreciate selection of the articles because, in my opinion, this wide

range of research interest interconnected by geographic area is the evidence of multi-disciplinary approach of the candidate and his development in the field of biodiversity research. The most recent article dealing with pollinator syndrome under different environmental conditions (published in Ecology Letters) in the thesis is a good example of candidate research excellence.

I have several questions for the candidate:

Can you roughly estimate the proportion of undiscovered species of Lepidoptera from Mt. Cameroon and specify some of the other families that are also neglected? Is the situation the same for other popular insect orders such as Coleoptera or Orthoptera?

The paper on moth diversity in south African savannahs was accepted in the journal Insects, which is the one of relatively high impacted MDPI journals. Many researchers and institutions consider the publisher as controversial and suspect of predatory practices. I would like to know candidate experience with peer review process and his attitude towards MDPI journals (I have to mention that the quality of the candidate paper is very good and my team also published in Insect and I have reviewed several manuscripts there).

There is no doubt that Robert Tropek's habilitation thesis meets all the requirements for this type of graduation work. Further, the thesis forms the whole and is not only readable but also entertaining. As I know Robert, I am not surprised that I did not find any substantial flaw. I am happy to have the opportunity to be the reviewer and I strongly recommend to award the candidate the "docent" title.

In Ostrava, 14th December 2022

Pavel Drozd