

## **Annex 6: Habilitation thesis reader's report**

**Masaryk University**

**Faculty** Faculty of Science

**Field of Habilitation** Botany

**Applicant** RNDr. Jakub Těšitel, Ph.D.

**Affiliation** Department of Botany and Zoology, Faculty of Science,  
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**Habilitation Thesis** Ecology of (hemi)parasitic plants

**Reader** Gerald M. Schneeweiss

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### **Report Text**

The present habilitation thesis addresses ecological aspects of parasitic plants with a focus on hemiparasitic Orobanchaceae. The thesis coherently covers topics ranging from a novel functional(-morphological) classification of parasitic plants via ecophysiological aspects of host-parasite interaction to community impacts of hemiparasitic plants, including their utility in ecological restoration. The main part of this thesis are 10 manuscripts published in peer-reviewed national and international journals, including high-impact ones, underlining the significance of the candidate's contribution to ecological research on (hemi)parasitic plants. It will be a combination of multifaceted ecological approaches, as documented in this thesis, with genetic and genomic data that will not only help us understand the role and dynamics of parasites in ecosystems but will also be of relevance for applied aspects, including those connected to parasitic pest species.

### **Reader's questions to answer to defend the habilitation thesis (number of questions is upon reader's consideration)**

1. What are possible community effects, if any, of increased host specificity of parasitic plants?
2. What is the evolutionary potential of parasitism in the light of the presence of several phylogenetically isolated highly specialized lineages?
3. Could hemiparasites also be used as control agents in forest ecosystems (e.g., against *Solidago*, *Impatiens*)?
4. Evolutionary success of mistletoes: their success really due to epiphytism or rather (at least in Loranthaceae) mostly by pollination ecology or other factors?
5. Patterns of habitat use and ecological niches of root-hemiparasites found for Czechia: can these be extended to other areas and/or other groups of hemiparasites?
6. Could holoparasites have similar ecosystem-level effects as hemiparasites, e.g., as ecosystem engineers?
7. What can we learn from (usually) non-pest hemiparasites with respect to parasitic pest species?

## **Conclusion**

Jakub Těšitel's habilitation thesis of "Ecology of (hemi)parasitic plants" does – ~~does not~~ meet the standard requirements for a habilitation thesis in the field of Botany.

In Vienna on 24. August 2017