

Supervisor's evaluation of the PhD thesis

Jakub Těšitel

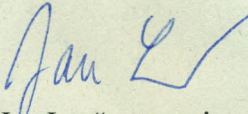
Biology of the Root-Parasitic Rhinanthoid Orobanchaceae

The thesis consists of seven studies and short general introduction. Of the studies, six are empirical studies, the Paper 3 is a review of the heterotrophic carbon gain by hemiparasites, which is one of the central topics of the thesis. Of the seven papers, five have been already published (including publications in *New Phytologist*, IF=6.5, *Planta*, IF=3.1), two papers are in the form of ms. (but I firmly believe that they will be published soon, one is about to be submitted). In six out of the seven papers, Jakub is the first author. In most cases, Jakub was able to organize working team of (graduate) students, who cooperated with him and were led by him and finally, Jakub was very proficient in writing the reports. (Also in the paper, where Jakub is not the first author, he was able to supervise and organize a French intern, working in my lab, and finally to put results of her work to the publishable form.) He has also highly profited from the co-operation with Duncan Cameron and also from his repeated stays in the David's lab in the University of Sheffield.

The thesis tackle the problem of hemiparasitic Orobanchaceae (when needed, including also the holoparasitic species from the Rhinanthoid group) from several angles, in particular, he combines nicely the phylogenetic and evolutionary approaches with the ecophysiological studies. Of those, he pays special attention to the heterotrophic carbon gain in hemiparasites. I highly value his synthetic approach, with aim to combine the phylogeny, ecophysiology, and field ecology of investigated species. I also highly values the extend of methodological approaches used, including use of stable isotopes, electron microscopy, use of phylogenetic approaches, and excellent ability of data analysis.

In my view, this is an excellent thesis. Undoubtedly, there are some errors and mistakes there, but I am not aware of them: to search for them is a task for the reviewers.

July 1st, 2011


Jan Lepš, supervisor