

Posudek školitele na diplomovou práci Štěpánky Ruthové

(Supervisor's evaluation of the MSc. diploma thesis of Štěpánka Ruthová)

During the studies, Štěpánka has clearly shown her qualities as an outstanding student, and lately more and more as an independent-minded colleague in our *Daphnia* hybridisation project. She finishes her undergraduate studies as a co-author of two papers in peer-reviewed journals, with the prospect of publishing at least two as the first author from the results presented in this thesis. In particular, I appreciate Štěpánka's constructive feedback when writing our paper for the *Philosophical Transactions of the Royal Society B*.

I, as the thesis supervisor, have been at the creation of the two chapters presented within it, so I already had chance to provide my comments and criticism. I am aware of a few minor formal errors, which remained in the final version; nevertheless, these do not lower the overall high standard. I will leave the task of the critical evaluation of the thesis for its referee, and I fully recommend the thesis for the defence as more than fulfilling the requirements for the Czech title "Magistr".

The most important having said, I will spend few more lines to provide some background information about the thesis development. When we originally met, Štěpánka selected the topic I proposed on a genetic structure of a vertically migrating *Daphnia* population. Fortunately, the locality with that particular *Daphnia* population became inaccessible, so Štěpánka joined our project on *Daphnia* species and hybrids in reservoirs, which had just started.

During the subsequent years, the topic of the thesis has not stopped evolving. From the originally relatively simple idea of comparing the taxonomic composition of *Daphnia* obtained by methods based on DNA analysis and allozyme electrophoresis, she got into testing more demanding hypotheses, and finished by presenting one of the most detailed datasets on a fine-scale genetic structure of hybridizing *Daphnia* populations.

The two chapters presented in Štěpánka's thesis have several names listed as co-authors. This is a necessity, as many people have been involved in the data collection and analysis. I have influenced the final wording, polished various English expressions, and provided advice and comments. However, most of the presented results are Štěpánka's own, as are the ideas and interpretations of the results. Some of these ideas are controversial, various hypotheses require more testing, and may not survive until the publication. In any case, I look forward to the further collaboration with Štěpánka during the process of forging the individual chapters of the thesis to manuscripts for some high-ranking scientific journals.

In Prague, September 6, 2008



RNDr. Adam Petrušek, Ph.D.