

Supervisor's comments on the Ph.D. thesis

Mgr. Zuzana Urbanová

„Effect of drainage and restoration on the ecology of peatlands in the Šumava Mountains“

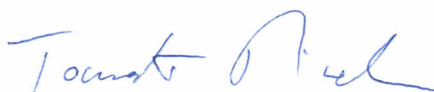
Zuzka's thesis was focused on vegetation structure, carbon fluxes and soil microbial processes in peatlands affected by drainage and restoration. The aim of the thesis was to evaluate the effect of drainage and restoration on the ecology of different types of peatlands – ombrotrophic bogs and minerotrophic fens. Unfortunately, the restoration of drained minerotrophic fen which was planned by the Šumava National Park in the first year of Zuzka's study was not done because of bureaucratic reasons. Thus the effect of restoration could be studied on bog sites in the field only. Therefore Zuzka did experiments under laboratory conditions at first in which she simulated restoration of peatlands by soil flooding (the results were described in her first paper). Later in the field the research was focused on vegetation structure and measuring of carbon fluxes through different plant communities used then for modelling of carbon fluxes and calculating of whole ecosystem carbon balance. In the third year of study the research was widened by spruce swamp forest sites which belong to minerotrophic mires and it was possible to find restored, drained and pristine sites in the Šumava Mountains.

Zuzka worked on peatlands in the Šumava Mountains already during her Master degree but the topic was totally different from her Ph.D. thesis. Therefore she had to review new literature and learn many new field and laboratory methods in the first year of her study. She also studied modelling of ecosystem carbon fluxes during her stay in Helsinki where she was visiting Peatland ecology group (Eeva-Stiina Tuittila). She also supervised one Master student from the University of Helsinki and one Bachelor student from our faculty, collaborated with Ph.D. student from Finland and wrote one common manuscript with her.

I would like to mention that Zuzka was great in organizing her work, although the field research was quite complicated and time-consuming. It was pleasure for me to collaborate with Zuzka during her Ph.D. study. She wrote four manuscripts, three of them as the first author, one as co-author. Two papers were already published, two manuscript has been submitted for publication. Zuzka presented her results on several international conferences, she was teaching several practical lessons at our faculty, organized excursions to Šumava peatlands etc.

I am sure that all duties necessary for getting Ph.D. title were fulfilled so it is my great pleasure to recommend the thesis for defence.

České Budějovice, August 23, 2012



Ing. Tomáš Píček, Ph.D.