



Přirodovědecká
fakulta
Faculty
of Science

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice

SUPERVISOR'S STATEMENT ON BACHELOR THESIS

Name of the student: Helene S. Gemeinhardt
Study program: Biological Chemistry
Department/Institute: Institute of Chemistry and Biochemistry
Thesis title: Testing cross-amplification of microsatellites on European *Ranunculus* sect. *Batrachium* species

Supervisor: Petr Kouřecký, Ph.D.
Supervisor's affiliation: Department of Botany

Comments of the supervisor on the student and the thesis:

The thesis had two aims: 1) for the student to learn the basics of work in a standard molecular biology laboratory, and 2) to test microsatellite analysis, which is one of the molecular methods often used in plant systematics and population genetics, on a new material (new group of studied plants). In my opinion, both aims were fulfilled. The student learned DNA isolation (two different methods), PCR, electrophoresis on agarose gels, and preparation of samples for Sanger sequencing and fragment analysis. I would like to highlight here that she – after some initial training – did all the lab work herself and that amount of work is more than sufficient for a bachelor thesis. She also worked with the raw data from sequencing and fragment analysis, with a necessary and usual help of a supervisor. The results obtained are valid. Although the results are negative (the microsatellites cannot be cross-amplified from Asian species *Ranunculus bungei* to European species), I am sure that this is the real situation and not technical or any other error during the work. The obtained knowledge will be used in further studies of this plant group – new loci must be found and primers developed to apply microsatellite analysis on European taxa.

Concerning the text, it has a standard structure and extent and includes all necessary information. I appreciate that the student wrote first versions of all chapters and found the major part of cited literature herself; the level of commenting and editing from me as a supervisor was moderate and usual for a bachelor thesis. Only the Discussion is relatively short; however, this is partly caused by negative results, which are only rarely published and it is difficult to find the literature for comparison.

Overall, in my opinion the thesis of Helene S. Gemeinhardt fulfils all the requirements of a Bachelor thesis at the University of South Bohemia, Faculty of Science.

Conclusion:

In conclusion, I r e c o m m e n d the thesis for the defence.

In České Budějovice, 10th September 2019


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