



Přirodovědecká  
fakulta  
Faculty  
of Science

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

## STATEMENT OF THE BACHELOR THESIS SUPERVISOR

**Name of the student:** Anna Polášková

**Study program:** Biological Chemistry

**Department/Institute:** Institute of Chemistry and Biochemistry

**Thesis title:** Cyanobacteria and microalgae associated with mosses in wet meadows (High Arctic)

**Supervisor:** Josef Elster

**Supervisor`s affiliation:** Centre for Polar Ecology, Faculty of Science, University of South Bohemia in České Budějovice

	Point scale <sup>1</sup>	Points
<b>(1) FORMAL REQUIREMENTS</b>		
Formal and graphical quality of the thesis	0-3	3
Ability to work with literature	0-3	3
Language and stylistics	0-3	3
Formal requirements – points in total		9
<b>(2) PRACTICAL REQUIREMENTS</b>		
Fulfillment of the aims	0-3	3
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	3

---

<sup>1</sup> Mark as: 0-unsatisfactory, 1-satisfactory, 2-average, 3-excellent.

Discussion quality – interpretation of results and their discussion with the literature	0-3	3
Experimental difficulty of the thesis, independence in experimental work	0-3	3
Contribution of the thesis to the knowledge in the field and the possibility to publish the results (after eventual supplementary experiments)	0-3	3
Practical requirements – points in total		24

<b>POINTS IN TOTAL (MAX/AWARDED)</b>	<b>24</b>	<b>(0-24)<sup>2</sup></b>
--------------------------------------	-----------	---------------------------

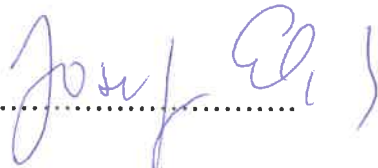
**Comments of the supervisor on the student and the thesis:**

Excellent Bc thesis. Evaluation enclosed.

**Conclusion:**

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

In České Budějovice      date May 27, 2018

.....  
  
signature

<sup>2</sup> Enter the number of points awarded.



Přírodovědecká fakulta  
Faculty of Science  
Jihočeská univerzita  
v Českých Budějovicích  
University of South Bohemia  
in České Budějovice

*Assoc. Professor Josef Elster, Ph.D. Centre for Polar Ecology, Na Zlaté Stoce 3,  
37005 České Budějovice, Czech Republic  
Phone: 00420 724 384 001, e-mail: jelster@prf.jcu.cz*

## ***Bachelor thesis supervisor evaluation***

Anna Polášková has participated in our **Winter Arctic Ecology** (KBO/326) and **Polar Ecology** (KBE/263) - **Polar Ecology (life science) - field exercise** (KBE 265) courses. Winter Arctic Ecology course was part of AB-329/829 **Arctic Winter Ecology** course organised by University of Svalbard (UNIS). All these experiences help her to understand polar ecology as a global ecological topic. For her Bc thesis I have offered her to continue in study of cyanobacteria and microalgae community associated with mosses and vascular plants in wet meadows. The wet meadows are the most productive plant's communities in high Arctic where sing of Carbon occur. In previous study (Lesniak, 2012, MSc. thesis, CPE-USB) there have been shown that, wet meadows are complicated system where cyanobacteria and mosses association is so tight that their separation, identification and quantification is very difficult. Because of global importance, this research topic is presently developed in terrestrial moss communities (Iceland – research topic of Prof. Jónsdóttir, University of Iceland) and bottom lake communities (Antarctica – Prof. Imura, National Institute of Polar Research, Japan). In Bc thesis Anna summarised all available literature data concerning moss-cyanobacteria association including up to now knowledge concerning biochemical relationship (chemo-attractants). She also summarised our present knowledge about cyanobacteria in respect of their role as a nitrogen fixators. She has applied different methods of mechanical dislodging followed by evaluation of cyanobacteria/microalgae biovolume estimation (essential for estimation of cyabobacteria biomass in respect of nitrogen fixation). She also used molecular methods for more precise determination of cyanobacteria diversity in studied samples.

Thesis brought a new data concerning ecological role of cyanobacteria in polar ecosystem. Thesis is well prepared. I am glad I can suggest that Anna's thesis represent excellent skills and knowledge about particular topic of polar ecology.

České Budějovice, May 27, 2018

Josef Elster  
Associate Professor  
Centre for Polar Ecology