

Supervisor's evaluation

Student: Hanna Huryna, M.Sc

Study programme: Biophysics

Affiliation: University of South Bohemia in České Budějovice

PhD thesis: Effect of different types of ecosystems on their meteorological conditions and energy balance components

Hanna Huryna, M.Sc. started her doctoral study in Biophysics in February 2008. Topic of her thesis was: „**Distribution of solar radiation, temperature and humidity in different types of ecosystems**“.

During the first 4 years of her study H. Huryna passed compulsory and obligatory courses of the Biophysics study programme and successfully passed the state exam on 24.06.2010

She was actively involved in Summer School programme in Academic Centre of Nové Hradý. She assisted effectively in training programme for Faculty of Sciences Charles University Prague (Ecophysiology of Plants) and in International Training Courses on Applied Limnology held at ENKI Třeboň and organised by Austrian Academy of Sciences and UNESCO – IHE Delft.

Hanna Huryna for her thesis in cooperation with ENKI, o.p.s. did following field and practical activities:

- Sampling of biomass and calibration measurements on experimental sites
- Data collection from data base and field.
- Analyses of data from experimental stations located in Třeboň Biosphere Reserve.
- Analyses of daily series of temperature (T), air humidity (AH) and solar radiation (R) (incoming, reflected, albedo)
- Comparison of dynamic of T, AH, R in selected ecosystems
- Interpretation, work on manuscripts for publication of results

Hanna Huryna collected and studied systematically literature on broad topic of her thesis and progressively presented and published her results on daily and seasonal dynamics of solar radiation, temperature, air humidity. She also substantially contributed to accomplishing a joint paper on solar energy dissipation in the special issue of International Journal of Water. In years 2012 and 2013, she participated in the project on solar energy distribution and evapotranspiration in agriculture landscape for Ministry of Agriculture. Her published results and figures have been presented by colleagues in international conferences and are published in the text book on Agroecology as well as in Encyclopedia of Wetlands.

Hanna Huryna fulfilled her duties reliably and in time. She acquired experience in dealing with editors of international journals and developed very good practice in searching for literature on anthropogenic effects on climate as well as on role of water and vegetation in local climate. For critical review of published results and conclusions she makes use of her biophysical background.

Direct role of water and vegetation in distribution of solar energy and in forming of local climate does not belong to main streams of science on landscape and climate. Hanna Huryna managed to answer difficult questions and objections of reviewers of her manuscript to Wetlands Ecology and Management Journal.

Hanna Huryna evaluated large series of data systematically, interpreted her results critically with respect to both to reality and relevant literature, she consulted her results with me regularly and wrote her thesis independently. I recommend her thesis "Effect of different types of ecosystems on their meteorological conditions and energy balance components" to the defence.

Třeboň 3. November, 2014


doc. RNDr. Jan Pokorný, CSc
Supervisor

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Hanna Huryna zpracovala systematicky rozsáhlé soubory meteorologických dat měřených v různých ekosystémech v průběhu několika let. Kriticky svoje výsledky zhodnotila a respektovala přitom realitu sledovaných ekosystémů i odpovídající odbornou literaturu. Hanna Huryna se mnou konzultovala svoje dílčí výsledky pravidelně a vlastní disertaci psala samostatně. Doporučuji její doktorskou disertační práci „Effect of different types of ecosystems on their meteorological conditions and energy balance components“ k obhajobě.