

Review on the Ph.D. thesis by Jana Veselá

The thesis is well and clearly written without purposeless paragraphs and prolongation. The presented thesis has introduction, where the background for the main part of work is summarized. Also the problematic of delimitation of diatom species is briefly, but in a well-arranged way described. The main part (results) is composed of 3 articles published in the established journals of diatoms research and one manuscript prepared for the publications. Conclusion clearly summarized the obtained results of students work. The presented work meets all requirements for the Ph.D. thesis. Jana Veselá showed up that she is able to formulate hypothesis and test them; designed the experiment; process the data and finished her work with the publication. She used wide range of techniques to investigate the taxonomy and ecology of Diatoms. Her published papers have increasing quality, and deal with more complex and more difficult tasks during her Ph.D.study. I recommended the thesis to the defense and Ph.D. degree for Jana Veselá.

The questions for Jana Veselá:

The taxonomy of diatom is nowadays in the development and polyphasic approach used for their study is not possible for the workers from the hydrobiological institution such as Vltava River Authority. Which identification keys should they use for the regular monitoring of the water bodies, which species concept would you recommended for them? How valid are the Van Dam's indication values, if we have cryptic species, which may have only minor morphological differences and on the other hand species which morphology is tied with the environmental stimuli?

Do you recommended, according the results from your second article, to measure separately the postinitial and sexually competent cells to get the valve character or do you think that is enough to measure combined set of all life stages cells to characterized the species or strain? Do you prefer the ubiquitous dispersal hypothesis or restricted distribution?

In manuscript 2, Table 1 is missing in the thesis.

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