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**Subject:** evaluation of PhD thesis of Martin Krajiček (Faculty of Science, Charles University in Prague)

I received a paper version of the thesis entitled "Diversity of European freshwater cyclopoid species: phylogeny morphology and ecology" on 22 September 2014. Thesis contains in total 142 pages, of them 136 enumerated and with text, tables, figure and photos. First 6 pages are not enumerated and contain cover page with title of PhD thesis and authors name (page 1), information on study site and study program (page 3) and declaration on originality of work (page 5), each of them separated from previous page by blank sheet.

The thesis includes: Preface and acknowledgements, Abstract (in English and Czech), six consecutive chapters and References. Chapters are as follows:

**Chapter 1:** The doctorand presents morphology and ecology of copepods with special emphasis on ordo Cyclopoida. Instead of classical »hypotheses« there are listed »Aims of the thesis« (p. 18) where there are clearly defined aims of the thesis but no a hypothesis itself. However, from the concept of the aims can be clearly drawn the hypotheses, too.

**Chapter 2:** In this chapter is presented a manuscript entitled »The genus *Cyclops*: and integrative taxonomy approach reveals two new species and confirms thirteen others«. The manuscript was prepared by doctorand himself (as first author), and six other co-authors. However, it is not yet indicated which journal will be contacted or if the paper is already submitted.

**Chapter 3:** In this article »Congruent patterns of lineage diversity in two species complexes of planctonic crustaceans, *Daphnia longispina* (Cladocera) and *Eucyclops serrulatus* (Copepoda), in East European mountain lakes« published in »Zoological Journal of the Linnean Society« in 2012 (impact factor: 2.58), Martin Krajiček was one of two first authors with equal contribution to the work.

**Chapter 4:** Article »When anthropogenic translocation meets cryptic speciation globalised bouillon originates; molecular variability of the cosmopolitan freshwater cyclopoid *Macrocyclus albidus* (Crustacea: Copepoda) « was published in co-authorship with Tomislav Karanovic in »International Journal of Limnology« in 2012 (impact factor: 0.74).

**Chapter 5:** Article »First molecular data on the western Australian Diacyclops (Copepoda, Cyclopoida) confirm morpho-species but question size differentiation and monophyly of the alticola-group« was published in »Crustaceana« in 2012 (impact factor: 0.47).


**Chapter 6:** In this chapter are presented use of molecular tools, which revealed some morphological, taxonomical, ecological and geographical distribution of copepods which were described in four separate articles. In the last two paragraphs are presented ideas for further studies on Copepoda, particularly on integrative approach to the taxonomy, phylogenetic and ecological studies. Next generation sequencing is particularly promising technique for such studies.

The Ph.D. thesis is based on four separated projects, each of them dealing another problem but with the common tools – molecular analyses of Copepoda. The results were published in international journals with impact factors. This is a good proof on quality of work done by the doctorand and his co-authors.

The results are of value for specialists on Copepoda as well as for other scientists, studying biodiversity, ecology or zoogeography. The elements of this research combine traditional techniques on morphology with modern molecular techniques and their combination produced very interesting results which can be easily published.

**Hereby I declare that the thesis fulfils the criteria necessary for obtaining the Ph.D. degree.**

Sincerely,

  
Prof. dr. Anton BRANCELOJ, univ. dipl. biol.