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OPINION

by

Prof. Emilia Varadinova PhD, Institure of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, member of a scientific jury in accordance with Order № 31/11.04.2025 of the Director of Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences.

Regarding: Procedure for awarding the educational and scientific degree "Doctor" in Field of Higher Education 4. Natural Sciences, Mathematics and Informatics, Professional Direction 4.3. Biological Sciences, Scientific specialty Hydrobiology.

Thesis topic: "**Zooplankton as a bioindicator of ecological status of standing water bodies"**

Author: Monika Atanasova Subeva, full-time PhD student in the Biodiversity, communities and processes in freshwater ecosystems research group, Division of Biodiversity and Functioning of Freshwater Ecosystems, Department of Aquatic Ecosystems at the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences.

Scientific supervisors: Assoc. Prof. Vesela Evtimova, PhD and Assoc. Prof. Lachezar Pehlivanov, PhD.

General characteristics of the dissertation

The PhD thesis is dedicated to studying the composition, structure and bioindicative potential of zooplankton communities, with the aim of characterizing the ecological status and trophic state of different types of standing water bodies. The dissertation contains all the necessary sections, including Introduction, Literature review, Aim and tasks, Working hypothesis, Material and Methods, Results and Discussion, Conclusions, Contributions and References. The PhD thesis is richly illustrated with appropriate figures and tables. A total of 136 titles were cited, of which 24 in Cyrillic and 112 in Latin, with nearly 1/5 of them being published after 2015. A separate list presents the standard and regulatory documents used in the dissertation.

The aim and tasks of the dissertation are clearly formulated. A comprehensive review of the thematic literature has been made. The Material and Methods section describes the design of the study, the model objects, the methods of sample collection, field measurements and laboratory processing, the evaluation indices, as well as the approaches for statistical data analysis. The Results and Discussion section presents the taxonomic structure of the zooplankton communities. The indicator taxa that characterize the trophic state and ecological potential of the studied standing water bodies are described. The results are supported by four scientific publications, which analyze different aspects of the tasks set. A total of 13 conclusions, which correspond to the topics of the study are summarized. Eight scientific and applied contributions are systematized, four of which are original in nature and three of a confirmatory nature.

The PhD thesis summary reflects correctly the content of the dissertation and presents adequately the main results and contributions.

Publications on the topic of the dissertation

A total of four publications have been attached on the topic of the dissertation, which have been published in the scientific journals Acta Zoologica Bulgarica (Q3), Ecologia Balkanica (Q4), Journal of BioScience and Biotechnology and Annuaire de L'Universite De Sofia "Kliment Ohridski". It should be emphasized that Monika Sabeva is the first author in all presented publications.

Personal impressions of the PhD candidate

I have personal impressions of Monika Sabeva from our joint work on the LTER-BG project. Monika possesses the necessary knowledge and practical training, thanks to which she professionally fulfills the scientific tasks assigned to her. She is distinguished by valuable personal qualities such as responsibility, modesty and respectful attitude towards her colleagues.

Questions, critical notes and recommendations

I have a few notes on the dissertation. In my opinion subsection 2.2.4 has no place in section 2.2 and should be dropped. The working hypothesis is presented too briefly, it would be good to develop it further. Furthermore, I would define the third contribution more as a conclusion than as contribution.

I recommend that Monika Sabeva continue and deepen her research on the indicative potential of zooplankton and on other representative types of standing water bodies, including in unaffected and affected by different types of anthropogenic impact.

Conclusion

The presented PhD thesis is a completed scientific study with a pronounced scientific-applied character, dedicated to assessing the indicative potential of zooplankton communities. Monika Sabeva demonstrates fluency in specialized terminology, possesses excellent theoretical training and practical skills, an undeniable contribution to which is the expert support of her scientific supervisor, Assoc. Prof. Dr. Vessela Evtimova.

In view of the above, **I give my positive assessment of the PhD thesis and recommend the respected Scientific Jury to award the educational and scientific degree "Doctor" to Monica Subeva** in Field of Higher Education: 4. Natural Sciences, Mathematics and Informatics, Professional Direction 4.3. Biological Sciences, Scientific Specialty Hydrobiology.

Sofia, 30 June 2025

Author of the opinion:

(Prof. Dr Emilia Varadinova)