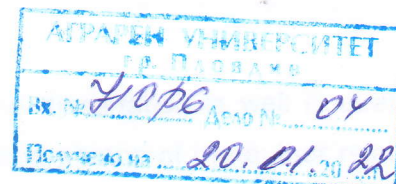


## OPINION



on the dissertation for awarding the Educational and Scientific Degree „Doctor“ (Ph.D.)  
in: Field of Higher education: 4.0. *Natural Sciences, Mathematics and Informatics*;  
Professional field: 4.4. *Earth sciences*; Scientific specialty: *Ecology and ecosystems protection*.

**Author of the dissertation:** **Gradimir Zhelyazkov Gradev**, PhD student in self-study,  
at the Department of Agroecology and Environmental Protection, Agricultural University, Plovdiv.

**Topic of the dissertation:** "RESTORATION OF THE KINDERGARTEN (*Falco naumanni*, Fleischer, 1818)  
AS A NESTING SPECIES IN BULGARIA".

By Prof. **Stefan Angelov Denev, D.Sc., Ph.D.**

Trakia University, St. Zagora, Bulgaria; Currently: Retired;

Field of Higher education: **4.0. *Natural Sciences, Mathematics and Informatics***; Professional field: **4.3. *Biological sciences***; Scientific specialties: *Ecology and ecosystems protection; Microbiology*;  
appointed as a member of the Scientific jury (**Order № RD-16-1318 / 23.1.2021**)  
by the Rector of Agricultural University, Plovdiv.

**1. Relevance of the problem.** The dissertation for the award of the Educational and Scientific Degree "**Doctor**" (**Ph.D.**) is devoted to problems related to reducing the number and population parameters of the biological species (*Falco naumanni*, Fleischer, 1818), including its critical threat and its gradual extinction from the territory of Bulgaria, as well as the search for solutions to them. The above problems are topical and dissertable. They are related to the conservation of biological diversity in our country, the ecosystems and processes related to it, and the increase in the number of natural populations of this species. Biodiversity is an integral part of our national wealth and its protection is regulated by law, due to its priority for our country, which also makes the dissertation relevant and significant.

**2. Purpose, tasks, hypotheses and research methods.** Based on the literature review and objective analysis of the above problems, as well as the presented modern regulatory requirements in this area, the purpose and objectives of the dissertation on the restoration of the *Falco naumanni* (Fleischer, 1818) as a nesting species in Bulgaria. From the point of view of the set goal and tasks, the used methodology is adequate and modern. The applied software for statistical analysis of the results, in order to objectify the conclusions, is also appropriate and up-to-date. Relatively large-scale and specific research work has been carried out. In order to achieve the above goal and the tasks arising from it, the doctoral student participated in the development of a European research project, on the basis of which the research was funded, which deserves high praise.



**3. Visualization and presentation of the obtained results.** The dissertation is well illustrated. It includes 24 tables and 18 figures. Apart from them, 17 more original photos of the author related to the dissertation are included in the Appendices. The experimental results are sufficient in volume and content and are well presented.

**4. Discussion of the results and used literature.** The results of the conducted field research are professionally and competently analyzed, interpreted and discussed on the basis of cited scientific publications and a number of normative documents on the problems of the dissertation. A total of 112 literature sources were used. Based on the discussion of the experimental results, 16 conclusions and 5 recommendations were formed, with important scientific-theoretical and practical significance.

**5. Contributions to the dissertation.** With the development of the dissertation a number of original, scientific (5) and scientific-applied contributions (5) are made, which are well formulated and derive from the experimental results (pp. 83-84). They are an objective criterion for the contributory nature of the dissertation and for its scientific and scientific-applied significance.

**6. Critical remarks and questions.** The doctoral student complied with the critical remarks and recommendations made by the meeting of the extended department council when discussing the dissertation and opening the defense procedure. They are taken into account in its final design. For this reason, I have no any critical remarks on the dissertation.

**7. Published articles and citations.** The author of the dissertation has published and presented a total of **15 scientific papers** in connection with it, of which 12 are in English and 3 in Bulgarian. Eleven (11) of the papers have been published in full, and five (5) are in the form of abstracts from participation in authoritative national and international scientific forums. The PhD. student is a leading author of 5 of them. At 5 he is the second author, and at 5 - respectively in third and subsequent places.

The citations of the above scientific papers are a good criterion for his personal contribution to the development of the dissertation. It is important to note that three (3) of his fully published papers are in authoritative scientific journals with Impact factor (IF) and/or Impact rank (SJR): *Journal of Biogeography* (IF = 3.723<sub>2019</sub>; SJR 1.7; Q<sub>1</sub>); *Biological Journal of the Linnean Society* (IF = 2.203<sub>2018</sub>; SJR 0.91; Q<sub>1</sub>) and *Ecologia Balkanica* (SJR<sub>2019</sub> 0.14; Q<sub>4</sub>). They are indexed and included in international databases: Scopus, Web of Science and many others.

In connection with the dissertation, a list of 8 participations in domestic and foreign scientific conferences and 1 participation in an international congress is presented, which shows that the results of the dissertation are well popularized.

I must say that two (2) of his fully published works have so far been cited 18 times abroad. The citations are in authoritative foreign scientific journals with Impact factor (IF) and/or Impact rank (SJR) and are included in the world-famous Scopus database (See:



<https://www.scopus.com/authid/detail.uri?origin=resultslist&authorId=55915921600&zone>) which deserves a very good rating. It is known that the citation of scientific papers is one of the objective criteria for the importance of the research and the original contributions to them.

During my examination in Scopus I also found that so far, the doctoral student is the author / co-author of a **total of 13 scientific publications, including 3 of the dissertation, which are cited a total of 55 times. His citation index (h-index), according to Scopus is 5.0**, which is a very good certificate for his scientific training, for the work of his supervisor - Assoc. Prof. Dr. T. Bileva, and the academic staff at the Department of Agroecology and Environmental Protection at the Agricultural University of Plovdiv.

The presented abstract objectively reflects the structure and content of the dissertation.

**CONCLUSION:** Based on the mastered and applied by the doctoral student modern research methods; the methodological endurance of the research; analysis of experimental results; the summaries, conclusions, recommendations and contributions made; published scientific papers and their citations. The presented dissertation meets the requirements of the Academic Staff Development Law of the Republic of Bulgaria, and the Regulations for implementation of the Agricultural University for its application, which gives me reason to evaluate it **POSITIVE**.

I would like to suggest to the esteemed Scientific Jury also to vote positively and to award Gradimir Zhelyazkov Gradev the Educational and Scientific Degree „Doctor“ (Ph.D.) in the Scientific specialty: *Ecology and Ecosystems Protection*; Professional field: *4.4. Earth sciences*; Field of Higher education: *4.0. Natural Sciences, Mathematics and Informatics*;

Подписите в този документ за заличени във връзка с чл.4, т.1  
От Регламент (ЕС)2016/679 (Общ Регламент относно защитата на данни)

**Date:** Dec. 28<sup>th</sup> 2021

Plovdiv