

EXPERT OPINION

by Mihaela Nikolova Nedyalkova, associate professor, Ph.D., IBER - BAS
of a dissertation for awarding the educational and scientific degree "Doctor"

by: field of higher education. 4. Natural sciences, mathematics, and informatics professional
direction 4.3. Biological Sciences. the doctoral program "Zoology"

Author: Polina Dimitrova Hristova

Topic: NEST FAUNA OF THE FRAGMENTS OF PLAIN FORESTS IN THE WESTERN
UPPER THRACIAN LOWLAND

Research supervisors: Assoc. Prof. Dr. Hristo Dimitrov

Assoc. prof. Dr. Georgi Popgeorgiev.

1. General presentation of the procedure and the PhD candidate

By order No. PD-21-494 dated 20.02.2024 of the Rector of the Plovdiv University "Paisiy Hilendarski" (PU), I have been appointed as a member of the scientific jury to ensure a procedure for the defense of a dissertation on the topic "NEST FAUNA OF THE FRAGMENTS OF PLAIN FORESTS IN THE WESTERN UPPER THRACIAN LOWLAND" for the acquisition of the educational and scientific degree "doctor" in the field of higher education 4. Natural sciences, mathematics, and informatics, professional direction 4.3. Biological Sciences, doctoral program "Zoology". The author of the dissertation is Polina Dimitrova Hristova - a full-time Ph.D. student at the Department of "ZOOLOGY" with supervisors Prof. Dr. Hristo Dimitrov and Prof. Dr. Georgi Popgeorgiev from Plovdiv University "Paisiy Hilendarski", Faculty of Biology.

The set of materials on paper presented by Polina Dimitrova Hristova is by Article 36 (1) of the Regulations for the Development of the Academic Staff of the PU, and includes the following documents:

- a request to the Rector of the PU to disclose the procedure for the defense of a dissertation work;
- curriculum vitae in European format;
- protocol from the departmental council related to reporting the readiness for opening the procedure and preliminary discussion of the dissertation work;
- dissertation work;
- abstract;
- a list of scientific publications on the subject of the dissertation;
- copies of scientific publications;
- list of noticed citations;
- declaration of originality and authenticity of the attached documents;

The PhD student has attached three publications.

2. Relevance of the topic

The present dissertation presents detailed and comprehensive information regarding the composition of the nesting avifauna in the fragments of plain forests in the Western

Gornotraki lowland. The author successfully evaluates the influence of the structure and characteristics of the fragments on individual populations and ornithocenoses. Considering the seriousness of habitat fragmentation and loss in recent years, and the increasing impact of these factors on the size and condition of populations, the subject of this dissertation can be assessed as extremely timely and relevant. The detailed analysis of the impact of the fragments of lowland forests on the species richness and abundance of birds, as well as the characteristics of the habitats made, are the main and most important parameters, based on which a comprehensive assessment of the state of the studied populations can be made and their habitats.

3. Knowing the problem

The author makes a detailed and critical analysis of all currently available information regarding the studied problem, providing data on the species composition, abundance, and attachment of the studied bird species to the respective habitats and their interrelationships. She has skillfully used this data to benchmark her own results. As a consequence of all this, the dissertation work has a clearly defined goal and tasks to be performed.

4. Research methodology

To determine the species composition, and the number of populations, as well as to analyze the influence of the forest fragments themselves and the characteristics of the habitat on the species richness and abundance of birds, modern, mutually complementary methods, fully adequate for the study, were used. Appropriate statistical analyses were used for data processing and reliability of the obtained results.

5. Characterization and evaluation of the dissertation work and contributions

The dissertation work is presented in the form of a book body, on 132 pages, together with the appendices. It is structured into eight main chapters, references, and appendices, which are very well-balanced according to their weight. A very good literary awareness has been demonstrated, based on which there are also clearly constructed and well-formulated aims and objectives. Thanks to the complex methods applied in the study, an impressive amount of data has been collected that can be used as a basis for future similar studies. A total of 6,814 observations of 95 species, representatives of 17 orders, and 38 families were registered within the scope of the study. The work is very thorough and precise, with serious scientific-theoretical and scientific-applied conclusions of an original and confirmatory nature. The large amount of collected, analyzed, and summarized information makes it possible to formulate and offer essential conclusions, which in the future would be relevant in making decisions with conservation significance. A huge volume of work was carried out, unique for similar types of studies in our country.

In my opinion, the work would benefit from clarifying at the outset of the literature review why birds are chosen as a suitable subject for ecological research. This is mentioned but not explained.

In the table 6 should describe why some values are marked in bold. These are probably the statistically significant values.

Conclusion 1 could be refined. It is not entirely clear whether it is the high species richness of the vegetation or the birds.

The dissertation has an undoubted contribution to the development not only of ornithological research on the territory of the Upper Thracian Lowland, but the results are also important for the future development of this direction on a national and European scale. Four original scientific and three scientific-applied contributions are presented, which are important not only for the reasons listed above but also as a solid foundation for the future career development of the doctoral student herself in this field.

6. Evaluation of the publications and personal contribution of the doctoral student

The doctoral student has presented three scientific publications, all in refereed and indexed journals with SJR and IF, thus meeting the minimum requirements of the National Research Council of Bulgaria and PU "P. Hilendarski". The leading role of the doctoral student in these studies is also obvious.

7. Abstract

The content and quality of the abstract are as required and accurately and reflect the main results achieved in the dissertation.

8. Recommendations for future use of dissertation contributions and results

In conclusion, I would like to congratulate the Ph.D. student for the huge amount of work, and the large amount of data that she was able to collect and process and analyze during her PhD studies. Such work requires persistence, perseverance, and a love of work to bring the research to a successful conclusion.

CONCLUSION

The dissertation contains scientific, scientific-applied, and applied results, which represent an original contribution to science and meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of Bulgaria and the relevant Regulations of PU "Paisiy Hilendarski" .

The dissertation work shows that the doctoral student Polina Dimitrova Hristova possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Zoology", demonstrating qualities and skills for independent conduct of scientific research.

Due to the above, I confidently give my positive assessment of the conducted research, presented by the above-reviewed dissertation work, abstract achieved results and contributions, and I propose to the honorable scientific jury to award the educational and scientific degree "doctor" to Polina Dimitrova Hristova in field of higher education: 4. Natural sciences, mathematics and informatics, professional direction 4.3. Biological Sciences Doctoral Program "Zoology"

01.04. 2024

Prepared the opinion:

Prof. Dr. Michaela Nedyalkova