**STATEMENT**

**Assoc. Prof. Dr. Gana Minkova Gecheva**

**PU „P. Hilendarski“, Faculty of Biology**

on PhD thesis for obtaining the educational and scientific degree "**Doctor**"

**in the area of higher education** 4. Natural sciences, mathematics and informatics

**professional field** 4.3. Biological Sciences

**scientific speciality** Ecology and ecosystem protection

**Author**: Emil Sashev Yordanov

**Thesis topic**: Breeding parameters and phenology of the Egyptian vulture (*Neophron percnopterus* Linnaeus, 1758) in Bulgaria

**Scientific supervisor**: Assoc. Prof. DSc Dilian Georgiev Georgiev

**1. General presentation of the documents submitted**

I have been appointed as a member of the scientific jury according to the Order No. РД-21-518/ 28.02.2024 of the Rector of Plovdiv University “Paisii Hilendarski” (PU) for awarding the educational and scientific degree "doctor”; PhD thesis „Breeding parameters and phenology of the Egyptian vulture (*Neophron percnopterus* Linnaeus, 1758) in Bulgaria“ in the area of higher education 4. Natural sciences, mathematics and informatics, professional field 4.3. Biological sciences, scientific speciality Ecology and ecosystem protection. Author of the dissertation is Emil Sashev Yordanov – full-time PhD student in department Ecology and environmental protection, scientific supervisor Assoc. Prof. DSc Dilian Georgiev Georgiev.

The set of materials on electronic media submitted by Emil Yordanov is in accordance with the Art. 36 (1) from the Rules for the Development of the Academic Staff of the PU.

**2. Relevance of the dissertation topic**

The presented dissertation examines a poorly researched aspect - the nesting biology and ecology of the Egyptian vulture, which provides a basis for effective measures for its conservation.

**3. Knowledge on the topic**

PhD student Yordanov demonstrates an excellent knowledge of the existing published literature. The literary sources are well selected and discussed, corresponding precisely to the analyzed problems.

**4. Methodical approach**

The methods chosen and implemented are consistent with the baseline outlined by the goal and objectives. The population of the Egyptian vulture in Bulgaria was covered, as all known nesting areas were observed for a period of 6 years, which illustrates the precision and completeness of the conducted study. Classic methods (binoculars, viewing tubes) are skilfully combined with new ones (photo traps, drone). The observed indicators (occupied territory, breeding pairs, etc.) are

presented in detail. Appropriate statistical processing of the data was performed using the Rstudio program. The maps were prepared with QGIS.

**5. Characteristics and evaluation of the dissertation and contributions**

The dissertation is structured as standard on 144 pages and includes eight sections (Introduction, Literature review, Aims and tasks, Materials and methods, Results and discussion, Conclusions, Contributions, Literature). In addition, a rich application with photo identifier, database, registered species with photo traps, photo material is presented. 5 tables and 32 figures are presented to the text for a better interpretation of the data.

The covered literature has an impressive volume: 409 literary sources, of which 24 in Cyrillic and 385 in Latin. Ten percent of it is from the last 4 years, which further illustrates the topicality of the topic.

The studies cover the period from 2017 to 2022. The obtained results are described in great detail and well illustrated with figures. An important result was the finding of more accurate reporting of nesting success by drone compared to the standard method. Sixteen conclusions are presented.

7 original, 6 confirmatory and 4 scientific-applied contributions were formulated. The main scientific contributions of the dissertation are indisputable and I fully accept them. Of the first group of contributions, three (numbered 6.1.3, 6.1.5 and 6.1.6) can be combined, but this does not diminish their significance.

**6. Scientific papers and personal participation**

On the topic of the dissertation, 2 scientific publications are presented, which exceed the required points by group of indicators G: a total of 37 points (with a required minimum of 30). The level of the PhD student's research activity is evidenced by the publication in journals with a high quartile: 1 in a journal with Q1 (Animal Conservation) and 1 in a journal with Q4 (Acta Zoologica Bulgarica). In one of the publications, the doctoral student is the first author.

I know Emil Yordanov as a student and PhD student at the Department of Ecology and Environmental Protection, Faculty of Biology, including having the opportunity to observe him during joint work on a project. He has always demonstrated exceptional diligence and dedication. I believe that he is an example and an inspiration to our other students. Based on my impressions and the materials provided, I highly value the personal participation of Emil Yordanov in the published works, as well as I give a high value to the dissertation.

**7. Thesis Summary**

The abstract consists of 32 pages and meets all requirements. It follows the content of the thesis by reflecting the main results and contributions.

**8. Recommendations for future use of dissertation contributions and results**

The data obtained are rich and their interpretation allows the formation of significant scientific publications, and in this sense I recommend that the unpublished results be formed and submitted to scientific journals.

**CONCLUSION**

The dissertation contains scientific and applied results, which represent an original contribution to science and meets 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 the ZRASRB and the Regulations of the PU.

The dissertation shows clearly that the PhD student Emil Yordanov possesses in-depth theoretical knowledge and professional skills in the field of Ecology and Environmental Protection by demonstrating qualities and skills for independent conduct of scientific research. Emil Yordanov has a long practice as a research ornithologist and during his studies he has demonstrated that he has very good methodological, theoretical and practical training.

Due to the above, I confidently give my positive assessment of the research conducted, presented by the above-reviewed PhD thesis, thesis summary, achieved results and contributions, and propose to the honorable scientific jury to award the educational and scientific degree "PhD" to Emil Yordanov in the field of higher education: 4. Natural sciences, mathematics and infor-matics, professional field 4.3. Biological Sciences, scientific speciality Ecology and ecosystem protection.

28.03.2024 г. .....

(Assoc. Prof. Gana Gecheva)