

OPINION

from Prof. Dr. Zdravko Hubenov – National Museum of Natural History, Bulgarian Academy of Sciences of the materials, presented for participation in a competition for the academic position of **Associate Professor** in the field of higher education 4. Natural Sciences, Mathematics and Informatics; Professional Direction 4.3. Biological Sciences; Speciality **Zoology** at the Plovdiv University Paisii Hilendarski, faculty of Biology, Department of Zoology

In the competition for Associate Professor, announced in the SG, № 92 from 18.11.2022 and on the website of the Plovdiv University Paisii Hilendarski for the needs of the Department of Zoology at the Faculty of Biology, Chief Assistant Petar Stoykov Boyadzhiev, Ph.D., from the Zoology Department of the Faculty of Biology participates in the announced competition as a candidate.

1. General description of the submitted materials

By order No. PD-21-334 dated 15.02.2023 of the Rector of the University of Plovdiv Paisii Hilendarski, I was appointed as a member of the scientific jury for the competition for the academic position of Associate Professor at the University of Plovdiv in the field of higher education 4. Natural Sciences, Mathematics and Informatics; professional direction 4.3. Biological Sciences; Speciality Zoology, announced for the needs of the Department of Zoology.

Only one candidate - Chief Assistant Petar Stoykov Boyadzhiev, Ph.D., from the Zoology Department of the Faculty of Biology participates in the announced competition.

The presented by Chief Assistant Petar Boyadzhiev, PhD, a set of materials (in electronic format) is in accordance with the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) of the Plovdiv University and includes documents described in the candidate's application to the Rector of the Plovdiv University dated 02/07/2023 for admission to the announced competition in Zoology. The set contains administrative documents (No. 1-15) and 23 scientific publications submitted for the competition. The documents clearly reflect the activities of Dr. Petar Boyadzhiev. This set of documents additionally includes the general rules for formulating reviews and opinions and the criteria for the relevant academic position.

The candidate, Dr. Petar Boyadzhiev, submitted 23 scientific works on the topic of the competition, published in the refereed specialized scientific publications. Attached is a list of scientific works related to the dissertation (8 items), 3 study guides, 2 research projects and materials for educational and pedagogical activities. 23 scientific works on the topic of the competition and 3 teaching guides are considered. All 23 scientific works have been published in 9 international journals with an impact factor in English, in 11 of which Dr. Boyadzhiev is the lead author. The candidate has presented 40 citations in the international refereed publications with an impact factor. The submitted documents are prepared precisely and correctly.

2. Biographical data

Petar Boyadzhiev graduated in Biology (specializations Ecologist and Nature Protection) at the University of Plovdiv in 1991. Until 1995, he was a doctoral student at the Department of Zoology. After the defense of his dissertation "Eulophid fauna (Hymenoptera, Chalcidoidea, Eulophidae) of the Rhodopes" he acquired the educational and scientific degree Doctor. From 1993 to 1995, he was an assistant at the Department of Zoology. Since 2003, he has been a chief assistant

at the same department. He participated in scientific projects and conducted 11 disciplines related to the zoology. He leads exercises, practices and supervises graduates. He demonstrates active research work both in the field research for material collection and in the processing and interpretation of the obtained data. In addition to his scientific works, Dr. P. Boyadzhiev participated in the enrichment of the national scientific fund with an unique entomological collection which is of great interest to the foreign specialists.

3. General characteristics of the candidate's activity

Educational and pedagogical activity

Petar Boyadzhiev has an intensive educational and pedagogical activity. He led lectures and laboratory classes in the disciplines Invertebrate Zoology, Parasitology, Biological Control, Zoological Objects in the Pharmaceutical Biotechnologies, Biological Control of Plant Enemies, Biological Basis of the Behavior, Methods of Collection and Processing of Zoological Materials, Protozoan Parasites of Man and animals, Medical Entomology, Animal Diversity and Entomology. He has developed lecture courses and presentations presented to students as electronic files for self-study. Under his leadership (in an individual cases together with colleagues), 11 graduates have successfully defended their diplomas. Dr. P. Boyadzhiev is a co-author of 3 teaching manuals in the field of the announced competition: Manual of laboratory exercises in invertebrate zoology (2009); Biology and health education for 7th grade (2018); Biology and health education notebook for 7th grade (2018). He participated in candidate student campaigns; accreditation procedures; training quality assurance activities; attestation committees; ethics committee, etc. **Regarding to the educational and pedagogical activity**, the contributions of Dr. P. Boyadzhiev exceed the requirements of the Faculty of Biology of the Plovdiv University Paisii Hilendarski for holding the academic position of associate professor.

Scientific and scientific applied activity

The scientific contributions are substantial, original, mostly fundamental theoretical and scientific applied. The main part of them are taxonomic, faunistic, zoogeographical, biological and conservative. Some of the contributions are ecological, theoretical and applied. The research work of Dr. P. Boyadzhiev is in the field of entomology. He has carried out a number of scientific and scientific applied developments that refer to studying the morphology, biology and ecology of the parasitic Hymenoptera in Bulgaria and other countries. The developed directions are current in theoretical and applied terms, as they are related both to the conservation of the faunistic diversity of Bulgaria and to some general conservation problems of the fauna.

TAXONOMIC CONTRIBUTIONS. A total of 4 new species of the family Eulophidae has been described. Determination tables for distinguishing of close taxa, revisions and redescriptions of the separate species according to the recommendations of the International Code of Zoological Nomenclature, are presented.

FAUNISTIC CONTRIBUTIONS. New genera and species of the family Eulophidae have been established for Bulgaria. New species were found for the fauna of the Nearctic, Turkey, Bosnia and Herzegovina. Rare species of Hymenoptera were found and the range of a number of taxa was extended.

ECOLOGICAL CONTRIBUTIONS. For some of the species of the Eulophidae family, new hosts have been established and the host-parasite trophic relationship has been studied.

SCIENTIFIC APPLIED AND METHODOLOGICAL CONTRIBUTIONS. A device has been created that allows placing small objects in the focus of the stereomicroscope and their three-dimensional movement without leaving the position of a clear image. This device is convenient to operate and is necessary when examining small objects.

The contributions represent a new direction and prove with new means essential aspects of the existing scientific fields. Some of them are accepted as the formulation of a new hypothesis and may contribute to obtaining a number of new and confirmatory facts. **Regarding the scientific activity**, the contributions of Dr. P. Boyadzhiev exceed the requirements of the Faculty of Biology of the Plovdiv University Paisii Hilendarski for holding the academic position of associate professor.

THE REFERENCE OF THE CONTRIBUTIONS correctly and accurately reflects the achievements of the participant in the competition. It contains the most significant results and conclusions from the research.

Citation rate

The achievements of Dr. Boyadzhiev are well accepted by specialists and are cited. In the documents, he had presented 40 citations according to the requirements of the competition in an international refereed publications with an impact factor. In the articles with citations of the works of Dr. Boyadzhiev, there are no articles with a critical content. They have been used to clarify the distribution and the ecology, familiarization of some taxa, resolve taxonomic questions and conservation of the species. Citations are from specialists who work in related fields and cover more than 3/4 of his publications. The number of citations exceeds the accepted requirements (would be higher if all citations were considered). Usually, in competitions, submitted citations are considered.

4. Evaluation of the personal contribution

From the presented documents under the competition a clear personal contribution of Dr. Petar Boyadzhiev in the implementation of the research work and the publishing of the materials is established. Dr. P. Boyadzhiev is an author of the main part of the scientific contributions presented in the articles. His work is well-defined and in many cases methodical. Most often, the co-authors have participated in the collection of material, in joint projects or are specialists in other taxonomic groups. Regarding the guides, the authorship of Dr. P. Boyadzhiev is expressed in the writing of certain chapters.

5. Recommendations

Two recommendations can be made.

1) Each course in a higher education institution is considered by the department and faculty councils according to a plan proposed by the teacher. These plans are also given on the websites of the most faculties. It is desirable that they be presented by the professors during their habilitation. 2) In the title of the Manual of Laboratory Exercises in Invertebrate Zoology in the next edition, it is desirable to add the word Animals.

CONCLUSION

The documents and materials presented by Dr. Petar Boyadzhiev **are in accordance** with the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Rules of Application of the ADASRB and the corresponding Rules of the University of Plovdiv Paisii Hilendarski.

The candidate has presented a **sufficient** number of scientific works, published independently of the materials used to acquire the educational and scientific degree DOCTOR. The works of the candidate contain original scientific contributions and are published in journals issued by international academic publishing houses. His theoretical developments have an application and some of them are directly oriented to the academic work. The scientific and teaching qualifications of Dr. P. Boyadzhiev are **unquestionable**.

The results achieved by Dr. P. Boyadzhiev in the educational and research activities **fully correspond** to the minimum national and additional requirements of the Faculty of Biology, accepted in connection with the Rules of Application of the ADASRB of the University of Plovdiv Paisii Hilendarski.

After getting acquainted with the materials and scientific works presented in the competition, analyzing their significance as well as the scientific and scientific applied contributions, I give a **positive** assessment and **recommend** the Scientific Jury and the Council of the Faculty of Biology to vote for the acquisition by Chief Assistant Dr. Petar Stoykov Boyadjiev to the academic position “Associate Professor” at the University of Plovdiv Paisii Hilendarski in the field of higher education 4. Natural Sciences, Mathematics and Informatics; professional direction 4.3. Biological Sciences (speciality Zoology).

30.03.2023

Prepared the opinion:

/Prof. Dr. Zdravko Hubenov/