Statement

by prof. Dr. Snejana Mihailova Grozeva, Institute of Biodiversity and Ecosystem Research (IBER), BAS

Concerning: competition for the occupation of the academic position "docent" in professional field 4.3. Biological sciences, scientific specialty "Zoology of invertebrates – Entomology", for the needs of the Biological Faculty, Sofia University “St Kl. Ohridski”.

In the competition for the academic position "associate professor" in professional direction 4.3. Biological Sciences, scientific specialty "Zoology of invertebrates – Entomology", for the needs of the Biological Faculty, Sofia University “St Kl. Ohridski”, announced in no. 5/17.01.2025 of the State Gazette, only one candidate appeared – chief assistant professor Dr. Ilia Vladimirov Gjonov - employee at Faculty.

Ilia Vladimirov Gjonov was born on 03.07.1976. In 2002, he graduated from the master's program "Biology and Chemistry" at the Faculty of Biology of the "St. Kliment Ohridski". In 2016, he successfully defended his PhD thesis, titled "Species composition, biological features and distribution of Fulgaromorpha (Insecta, Hemiptera) species in Bulgaria”. Dr. Gonov's main scientific interests are in the fields of entomology, biodiversity, conservation zoology, biological invasions, and cybertaxonomy.

To participate in the announced competition, Dr. Gjonov has submitted all the required documents. He participated in the competition with 23 publications, distributed as follows: under indicator B "Scientific papers in publications, referenced and indexed in world-renowned databases of scientific information (Web of Science and Scopus) with the equivalence of a habilitation thesis" - 8 publications and 130 points (out of the required 100); under Indicator D "Scientific publications in publications that are referenced and indexed in world-renowned databases of scientific information (Web of Science and Scopus), outside the habilitation thesis" - 15 publications and 243 points (out of the required 200). According to the reference attached by the candidate, 3 articles are in Q1, 9 in Q2, 7 in Q3 and 4 in Q4.

Since the candidate's articles published in Historia naturalis bulgarica, Ecologica Montenegrina and Travaux du Museum Natural d'Historare Naturalle "Grigore Antipa" fall into the group "publ. in edition with SJR without IF", which are evaluated with 10 points, a reduction in the number of points for the fulfillment of the Minimum National Requirements for professional field 4.3. Biological Sciences is required, and instead of 145, the points for Group B are 130, and for Group D - 243 (instead of 263), but even with this number, the candidate's scientific production covers and exceeds the Minimum National Requirements. The candidate has submitted a list of 49 participations in scientific forums, 34 of them abroad, the rest in our country.

In 9 of the presented publications, Dr. Gjonov is the first author, and in 4 of them he is the sole author, which is proof of his leading role in these studies. An indicator of the complexity of the research and teamwork skills is the fact that a large part of the publications is co-authored with

colleagues from both the University of Sofia and colleagues from various units of the Bulgarian Academy of Sciences - NMNHS, IBER, FI, and numerous colleagues from abroad.

The scientific papers submitted for the competition are original in nature and the more important scientific contributions in them are divided by the candidate into two main groups according to the minimum national requirements (group B and group D): 1) contributions to the habilitation work (in this case - articles equivalent to a habilitation work); 2) contributions outside the so-called habilitation work. The first group includes 8 publications, referenced and indexed in the world-renowned databases of scientific information (Web of Science and Scopus), published in journals with Q2 (5) and Q3 (3), respectively, which are united by a common theme - research dedicated to various aspects of the taxonomy, morphology, biology, ecology and bioacoustics of cicadas from the infraorder Cicadomorpha, with particular attention to introduced/invasive species, and in the second - 15 publications, respectively in Q1 (3), Q2 (4), Q3 (4) and Q4 (4).

The scientific publications presented in the competition are original studies, and the more important scientific contributions in them can be divided into several main directions:

- *Taxonomic and morphological* – a new species from Bulgaria is described with microphotographs, diagnosis and key to the European species of this genus; a fossil find of a cicada from Satovcha (Western Rhodopes) from the Middle Miocene is described; a phylogenetic scheme of the family Aphalaridae (Psylloidea) is proposed based on COI and Cytb; it is shown that based on a combination of DNA barcodes, morphological data and nutritional specialization, a reliable taxonomic distinction of species can be made;

- *Molecular* – in a genetic study of the Bulgarian species of the family Aphalaridae (Psylloidea), 80 COI and Cytb sequences for 25 species, mainly from Bulgaria, are presented, and for 15 of the species these are the first DNA barcodes. New primers have been developed for cases where standard DNA primers are assessed as inapplicable, which can be used in future studies. It has been established that Cytb has a higher interspecific divergence compared to COI, and allows for more accurate identification of the species of this group. By sequencing 16S rRNA, the endosymbiont prokaryotes of species of the genus *Diaphorina* (Psyllidae), close to *D. citri*, have been studied;

- *Faunistic* – a significant number of taxa new to the fauna of Bulgaria have been identified, including one introduced Asian species; new parasitoids specialized in cicadas have also been identified, as well as 5 more species from a genus already known for Bulgaria. Based on a multi-year (respectively 16 and 25! years) study, 17 species of Aphrophoridae and 16 species of singing cicadas have been mapped, and for each species a distribution map in the country is presented, regional synonyms are indicated, literary and new data on their distribution, as well as an analysis of the altitudinal and spatial distribution.

A contribution to the study of the biodiversity of the Maltese archipelago is the first record in Malta of the western Mediterranean species *Duilius bipunctatus* (Auchenorrhyncha: Cixiidae), which is considered extremely rare, on *Tamarix africana* (Caryophyllales, Tamaricaceae) in a dense population. The tribe Duiliini is new to Malta. Another species recorded for the first time from the Maltese Islands is *Agonoscena cisti* (Psylloidea, Aphalaridae) on various species of Pistacia. This

species is also new to Albania. 9 species of Psylloidea have been recorded for the first time in Bulgaria, and *Craspedolepta conspersa* has been recorded for the first time in the Czech Republic.

Alien and invasive species – the invasive North American species *Acanalonia conica* (Fulgoromorpha, Acanaloniidae) has been recorded for the first time in Bulgaria and Turkey; For the first time in the Western Palearctic (in Istanbul) the invasive Asian species *Ricania shantungensis* (Hemiptera, Fulgoromorpha, Ricaniidae) was established.

In addition to Hemiptera, research has also been conducted on the diversity of some Coleoptera in Turkey and Bulgaria.

- *Study of biology and ecology* – main and additional food plants were determined for several of the studied species – clarifying the full food spectrum of invasive species is important when determining possible plant protection measures. It has been suggested that cicadas develop very early in the spring and this is the reason why they are considered very rare. A calamity of a species of singing cicada and the damage caused by it to various trees in the field protection forest belts in Dobrudzha was established. The trophobiosis between cicadas and fulgaromorphs and ants was studied – occasional, short-term or longer-term. As xenobionts associated with fulgaromorphs, in addition to ants and other hymenoptera, moths, cockroaches and even snails and small geckos have been registered.

- *Bioacoustic* – based on oscillograms of 16 species of singing cicadas, studies have been made for the group of singing cicadas, and the acoustic method has been used as the main or additional method for species identification.

- *Data published in GBIF* – a significant contribution is also the publication of a significant amount of primary data for all (8722) specimens of the superfamily Cercopoidea from the Zoological Collection of Sofia University (BFUS), grouped into 6670 collection objects.

- *Microphotographs of living specimens* – numerous microphotographs of living specimens are an essential part of many studies – for the clarification of the trophobiont relationships of fulgaromorphs, for the study of introduced species, as well as for the study of psyllids; for most species newly established for Bulgaria, original macrophotographs are presented in the relevant studies.

- *Methodological contributions* – the innovative method for 3D printing an entomological block for mounting cardboard for sticking insects and labels. The model allows parameterization of the height of the steps and the width of the labels; the method for more efficient cutting of labels for entomological collections eases the work of curators of entomological collections.

A generally accepted criterion for the recognition and significance of the research carried out is their citation in publications by other researchers – the materials for the competition present 40 citations in articles published in Web of Science and Scopus, of a total of 17 of Dr. Gonov's works. Of these, however, we must exclude D2 and D7 as citations in journals not in Web of Science and Scopus, D31 as a preprint, and D4 as a hidden auto-citation. Thus, the citations in articles published in Web of Science and Scopus are 36, which provide him with a sufficient number of points.

Dr. Gonov is a participant in numerous scientific projects and the leader of a scientific project funded by the National Science Foundation, which received the highest score. Dr. Gonov has a significant role in organizing and implementing the digitization of the scientific collections of the Institute of Biological Sciences within the framework of the DISSCo-Prepare project.

Dr. Gjonov also has extensive teaching experience in the courses Invertebrate Zoology and Biological Invasions in three of the specialties at the Faculty of Biology (in some references a bachelor's program is indicated, in others a master's program, but this does not significantly change the role of the candidate in the teaching process). He takes an active part in organizing the work with students at the Faculty of Biology and has made a significant contribution to attracting them to organize and digitize the collections at the Faculty of Biology.

The candidate has a clearly established profile of scientific research work in the field of entomology, innovative and creative thinking, is able to work in a team, as well as to transfer his knowledge and skills to students and colleagues who have sought his competent help. His habilitation will strengthen the group of researchers in the field of zoology and entomology at the Faculty of Biology of the Sofia University and will bring it to an even higher level of teaching and scientific work.

Conclusion

I have had the pleasure of knowing Iliya Gjonov since he was a student at the Faculty of Biology of Sofia University, and later as an active and dedicated researcher of Auchenorrhyncha. Together we organized the VI European Hemiptera Congress in Bulgaria in 2012, which was repeatedly recognized by colleagues as the best of these congresses – Dr. Gjonov undoubtedly has serious merit for this assessment. He is distinguished by a deep interest, both in the scientific research itself and in the discovery and improvement of the most appropriate approaches and methods to achieve the set goals, and more than 20 years later we are witnessing the results of the consistently followed path – an impressive scientific production, meticulously produced, published in authoritative scientific journals and repeatedly cited. Dr. Gjonov is an erudite specialist, a valued and sought-after partner by colleagues in the scientific community both in our country and abroad.

The original scientific contributions in the field of entomology, the preparation and conduct of in-depth scientific research at the highest methodological level, the skills to work in a team and to train personnel, the recognition of colleagues at home and abroad, as well as my excellent personal impressions of the candidate's qualities give me reason to recommend with full confidence to the members of the Scientific Jury to propose to the Faculty Council of the Faculty of Biology of Sofia University to support the election of Dr. Iliya Vladimirov Gjonov as associate professor in the professional field 4.3. Biological Sciences, scientific specialty "Zoology of Invertebrates-Entomology" for the needs of the Faculty of Biology of Sofia University "St. Kl. Ohridski".