

OPINION

by Assoc. Prof. Albena Georgieva Gjonova, PhD (Sofia University “St. Kliment Ohridski”, Faculty of Biology), member of the scientific jury in the competition for academic position “Associate Professor” in professional direction 4.3 Biological Sciences (scientific speciality Entomology)

In the competition, announced in the State Gazette, no. 71/18.08.2023, only one candidate, Senior Assistant Boyan Petrov Zlatkov, PhD from IBER – BAS, applied with a full set of documents. The applicant's compliance with the legal requirements, including the national minimum requirements under the Act on Development of the Academic Staff in the Republic of Bulgaria and its implementing regulations, as well as Regulations on the conditions and procedure for acquiring scientific degrees and for holding academic positions in BAS and IBER-BAS shows, that the candidate has met and exceeded them.

Dr Boyan Zlatkov graduated from the Faculty of Biology, Sofia University “St. Kl. Ohridski” (2005) with the qualification "Biologist - Master in Entomology" and has obtained the educational and scientific degree "Doctor" in the direction 4.3 Biological Sciences (scientific speciality Entomology) (2011). From 2008 to 2015, he worked as a biologist at the Faculty of Biology, Sofia University. From 2015 to 2017, he was also the curator of the Zoological collection at the same university. From 2017 to the present, he has been working as a Senior Assistant in Entomology at IBER - BAS.

The list of the candidate's scientific works consists of a total of 47 publications, of which he has submitted 43 for the present competition. Of these, 28 are peer-reviewed publications that indexed in world-renowned databases of scientific information (Web of Science and Scopus), and he is first author in 13 of them. The total number of citations in impact-factor or impact-rank journals submitted to the competition is 40. His scientific activity is complemented by participation as an expert and researcher in 23 projects and membership in the Societas Europaea Lepidopterologica.

Dr. Zlatkov's research has made fundamental contributions in the fields of taxonomy, anatomy, and functional morphology of various groups of moths, as well as the anatomy and morphology of genitalia in other animals. The contribution statement accurately reflects the main findings published in the relevant competition field. The candidate's publications extensively cover research on moths. Some of Dr. Boyan Zlatkov's notable contributions in the field of entomology include the following:

- Taxonomic contributions – including the description of nine new species of the family Tortricidae from the Balkans and Caucasus, four subspecies of the families Tortricidae, Euteliidae and Noctuidae, redescription of the *Dichrorampha rilana* Drenowsky, 1909, first description of the unknown males of *Phtheochroa unionana* (Kennel, 1900) from Armenia and descriptions of the females of *Cnephasia heringi* Razowski, 1958, *Gypsonoma obraztsovi* Amsel, 1959 and *Dichrorampha rilana* Drenowsky, 1909, nomenclatural changes in the genera *Phtheochroa*, *Clepsis*, *Dichrorampha* and *Cnephasia*.

- Faunistic contributions – first records for Bulgaria of *Dichrorampha pentheriana* (Rebel, 1917) (Tortricidae), *Klimeschia transversella* (Zeller, 1839) (Douglasiidae), *Chrysoesthia sexguttella* (Thunberg, 1794) (Gelechiidae), *Asida cocquempoti* F. Soldati & L. Soldati, 2001, *Pedinus olympicus* Kiesenwetter, 1880 and *Platydemia europaea* Laporte & Brullé, 1831 (Tenebrionidae).

- Anatomical and morpho-functional contributions – developed a new technique for inverting and inflating the phallus in moths, which preserves the tissue, and modified standard scanning electron microscope holders with the ability to rotate the phallus 360°; study of the internal musculature of the phallus and copulation characteristics in *Eugnosta magnificana* (Rebel, 1914); elucidation of the male-female genital interaction in *Tortrix viridana* Linnaeus, 1758 with three-dimensional models of copulating pairs by micro-computed tomography, complemented with results from confocal laser scanning microscopy, scanning electron microscopy and histology; study of vesica morphology, position and function of deciduous and non-deciduous cornuti, possible interaction between male and female genitalia in subfamily Olethreutinae (Tortricidae); study of anatomical features in the interaction between the proboscis of *Macroglossum stellatarum* (Linnaeus, 1758) (Sphingidae) and the flowers of the introduced ornamental plant *Oenothera speciosa* Nutt (Onagraceae).

- Biological contributions - the flight period of two economically important species, *Enarmonia formosana* и *Retinia resinella* (Tortricidae), inquilines in the galls of *Andricus quercustozae* (Bosc, 1792) (Cynipidae), pollen analysis of the crop content of beetles of the family Oedemeridae, and the composition of insects in the winter diet of the bat *Miniopterus schreibersii* (Kuhl, 1817) were studied.

Dr. Zlatkov's scientific papers have been published in some of the most prestigious journals in the field (e.g. *Frontiers in Zoology*, *Zoomorphology*, *Biologia*, *ZooKeys*, *Arthropod-Plant interactions*, *Zootaxa*, etc.) and 18 of them are with quartiles as follows: Q1 - 2, Q2 - 8, Q3 - 5, Q4 - 3 and 10 are with SJR only.

Dr. Zlatkov is outstanding for his professionalism and perfectionism in scientific work, broad zoological profile, interest in fundamental research and methodological innovations. In addition to his scientific and expert activities, Dr. Zlatkov was involved in teaching undergraduate and PhD students in classes in Invertebrate Zoology and several courses in Entomology at the Faculty of Biology of Sofia University, as well as in the development of curricula for PhD students.

Conclusion

Dr. Boyan Zlatkov has an outstanding research profile in the field of the competition for Associate Professor in the scientific specialty of Entomology, meeting and exceeding the national requirements as well as those of BAS and IBER-BAS. His scientific achievements are significant and highly appreciated. He is a highly sought-after expert for scientific and applied research and his habilitation will contribute to the development of the IBER staff.

In conclusion, I give my positive opinion on the election of Dr. Boyan Zlatkov for the academic position of “Associate Professor” at IBER-BAS.

Sofia

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Assoc. Prof. Albena Gjonova, PhD