

Opinion

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on the competition for the academic position "**Associate Professor**" in the professional field 4.3. "Biological Sciences", scientific specialty "Ecology and ecosystem conservation", for the needs of the "Fauna, Taxonomy and Ecology of Invertebrates" Research Group to the "Biodiversity and Ecology of Invertebrates" Division, Department of Animal Diversity and Resources of the Institute of Biodiversity and Ecosystem Research (IBER) of the Bulgarian Academy of Sciences (BAS), announced in the State Gazette No. 92/03.11.2023.

The opinion is written in fulfillment of Order No.78/17.10.2023 by the Director of the IBER-BAS, Assoc. Prof. Dr. Vladimir Vladimirov.

The single candidate has submitted the necessary documents for participation at the competition for the academic position "Associate Professor" - **Chief Assistant Dr. Teodora Marius Teofilova** from IBER-BAS.

Dr. Teodora Teofilova graduated from the University of Forestry, Sofia with a Bachelor degree in Ecology and Environmental Protection in 2001 and a Master degree in Urban Ecology in 2004. In 2014, Teodora Teofilova successfully defended his dissertation with a title "Composition and structure of ground beetle (Coleoptera: Carabidae) coenoses in different types of ecosystems from the region of Cape Emine" developed at the Faculty of Biology, Sofia University "St. Kliment Ohridski", and obtained a doctoral degree in Ecology and ecosystem conservation. From 2015 and until now she is a Chief Assistant at IBER, BAS.

The documents submitted by the candidate have been prepared accurately and contain the necessary administrative documents and publications relating to the competition. They are in accordance with the Act for the Development of the Academic Staff in the Republic of Bulgaria and the Regulations of BAS and IBER for the implementation of this Act.

For the competition, Dr. Teodora Teofilova has presented 25 publications (apart from those for obtaining a PhD degree – four publications in the group of indicators A): 7 and 18 publications in the group of indicators V and G, respectively. They are in journals indexed in Web of Science and Scopus; with 2 publications in journals from the first quartile (Q 1)

(ZooKeys and Diversity), 1 in Q2 (North-Western Journal of Zoology), 10 in Q3 and 12 in Q4. Of the publications listed by quartiles, 12 were published in journals that are indexed only in Scopus (have a Scimago Journal Rank (SJR) and have no impact factor). Dr. Teodora Teofilova is the sole author of 8 publications (4 in *Ecologia Balkanica*, 3 in *North-Western Journal of Zoology* and 1 in *Zoology and Ecology*). In addition, she is first author on 47% of the publications co-authored with other scientists.

Dr. Teofilova has submitted a list of 34 citations in Web of Science and Scopus refereed journals. Twenty-four citations are in journals with an impact factor, and here I also include a citation to an article in *Annales Zoologici* (Print ISSN: 0003-4541) - in 2021 the journal has an impact factor of 0.990. In the Scopus database, the scientometric indicator, *h-index*, of the candidate is 5.

The review of the scientometric indicators submitted by Dr. Teofilova shows that all the minimum requirements for the academic position "Associate Professor" are fulfilled, and even exceeded – a total of 105 points for the publications in indicator group V (a minimum requirement of 100 points), 232 points for the publications in indicator group G (minimum requirement of 220 points) and the number of citations is 34, resulting in 68 points in Group D (a minimum requirement of 60). Dr. Teofilova was a leader of a project for fundamental research financed by the National Science Fund of Bulgaria, with a title: “Study of the faunistic diversity and assessment of the condition and ecosystems services in different types of model ecosystems in the Sarnena Sredna Gora Mts”, Project No KP-06-M21/2 from 12.12.2018. The candidate has submitted a list of information on participation in 17 projects on various topics, funded by the National Science Fund, the Ministry of Education and Science, projects within the framework of the BG03 Biodiversity and Ecosystem Services Programme and others; has prepared expertises on contracts with various principals (10 in total), a list of reviews of articles in reputable scientific journals, and has participated in 42 scientific forums.

The scientific contributions of the candidate are mainly on the fauna and ecology of the ground beetles of the family Carabidae, but there are also a number of contributions on other groups of animals. They can be briefly summarized in the following:

***Faunistic contributions***

- New records of Coleoptera to the fauna of Bulgaria: three species of ground beetles, family Carabidae - *Amblystomus rectangulus* Reitter, 1883 (captured by pitfall trap near

Zelenikovo, Sarnena Sredna Gora Mts.), *Anthracus insignis* Reitter, 1884 (captured by light trap at the Srebarna Wetland Nature Reserve) and *Carabus bessarabicus* Fischer von Waldheim, 1823 (registered in Chepan Planina Mt.); one leaf beetle species (family Chrysomelidae) - *Lilioceris faldermanni* (observed on *Fritillaria pontica* Wahlenb – new host plant association; Western Rhodope Mts., Sakar Mts. and Southern Black Sea coast); one species of the predaceous diving beetles, family Dytiscidae - *Deronectes fairmairei* (Leprieur, 1876) (Balgarka Natural Park) and one family Cerophytidae Latreille, 1834, one genus Cerophytum Latreille, 1809 and *C. elateroides* (Latreille, 1804) (pitfall trap; Sarnena Sredna Gora Mts.)

- New records of Diptera to the fauna of Bulgaria: *Stenochironomus* Kieffer, 1919 and *Cladotanytarsus lepidocalcar* Krüger, 1938 (family Chironomidae).

- New records of ground beetles to the fauna of Romania – *Brachinus (Brachynidius) bodemeyeri* Apfelbeck, 1904 (NW Viișoara) and *Microlestes apterus* Holdhaus, 1904 (N Călărași).

As a result of targeted researches, data on the species composition of the ground beetles have been obtained from various habitats in different parts of Bulgaria - the Danubian Plain, the Srebarna Reserve, Western Rhodopes, Eastern Rhodopes, Sakar Mts., Pirin Mts., etc., and over a total 160 species have been reported as new species for the respective regions. Knowledge of the distribution of syrphid flies (Diptera: Syrphidae), diving beetles and some small mammals in Bulgaria has been expanded.

#### ***Contributions of conservation significance:***

Locations of species of conservation importance have been identified, which contributes to biodiversity conservation. Based on the collected data, specific measures have been proposed to eliminate the impact of factors with negative influence and optimize the ecological situation, and have contributed to the preparation of Management Plans for some of the studied areas. The identification of the rare ground beetle *Carabus bessarabicus* in Bulgaria and the EU from the Chepan Planina Mt. will help to take measures for its conservation.

#### ***Ecological contributions***

- Original data are presented on the life form spectra of the ground beetles from different regions in Bulgaria, the ecological structure in terms of flight wing development and preference for humidity; habitat preferences of some carabid species.

- New data were obtained on the ecological structure of syrphid fly complexes in different agroecosystems and the effects of pesticides.

- Food preferences of the Eurasian otter, *Lutra lutra* (L., 1758) (Carnovora: Mustelidae) and the Long-eared owl *Asio otus* (L., 1758) (Aves: Strigidae) were assessed.

***Clarifying remarks on the submitted materials***

The species *Cryptochironomus supplicans* (Meigen, 1830) has been reported in Bulgaria before Subeva et al. (2019) by Uzunov et al. (2011).

Uzunov Y., Varadinova E., Yaneva I., Stoichev S., Vidinova Y. & Kumanski K. 2011. Long-term changes of the bottom invertebrate fauna of the Mesta River in Southwestern Bulgaria. *Annuaire de l'Université de Sofia "St. Kliment Ohridski", Faculte de Biologie* 99 (1 - Zoology): 33-52.

Article No 29 in the candidate's list of publications (document "06\_Teofilova\_papers") does not correspond to the pdf file of the specific article. Article No 50, referring to *Phosphaenus hemipterus* (Goeze, 1777) (Coleoptera: Lampyridae), is submitted as a pdf, a paper in the supplementary list of articles not considered in the competition.

The clarifying remarks do not detract contributions of the candidate.

***In conclusion:*** The review of the submitted documents and the scientific production of Dr. Teodora Teofilova shows that she is an active and highly productive scientist with a clear research profile in the field of ecology. Her scientific contributions correspond entirely to the requirements of Act for the Development of the Academic Staff in the Republic of Bulgaria and the Regulations of BAS and IBER for the implementation of this Act for the academic position "Associate Professor". On the basis of the above, as well as on my personal impressions, I strongly recommend the members of the Scientific Jury to support the election of **Chief Assistant Dr. Teodora Marius Teofilova** for the academic position of "**Associate Professor**" in the professional field 4.3. "Biological Sciences", scientific specialty "Ecology and ecosystem conservation".

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Sofia

/ Assoc. Prof. Dr. Teodora Toshova/