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STATEMENT

by assoc. prof. Nikolay Simov PhD, National Museum of Natural History, Bulgarian Academy of Sciences, as a member of the scientific jury

Concerning: competition for the academic position "assoc. professor" in professional field 4.3. Biological sciences, scientific specialty "Hydrobiology", for the needs of the Bioindicators, monitoring and ecological classification of freshwater ecosystems RG in Division of Biodiversity and Functioning of Freshwater Ecosystems, Department of Aquatic Ecosystems, IBER-BAS.

Materials received for the competition.

In the competition for the academic position "associate professor" in 4.3. Biological Sciences, scientific specialty "Hydrobiology for the needs of the Bioindicators, monitoring and ecological classification of freshwater ecosystems RG in Section "Division of Biodiversity and Functioning of Freshwater Ecosystems, Department of Aquatic Ecosystems, IBER-BAS, announced in no. 48/07.06.2024 2023 of the State Gazette, only one candidate applied –Dr. Violeta Georgieva Tyufekchieva - employee at the same institute

The documents, references, publications and lists with citations and project participations included in the presented by the candidate, Dr. Tyufekchieva, fulfill the legal requirements and regulations, and also the Regulations for the terms and conditions for acquisition of scientific degrees and for employment at academic positions in the Institute of Biodiversity and Ecosystem Research at BAS. Carefully checking the above-mentioned documents makes it clear that Dr. Violeta Tyufekchieva not only meets, but also significantly exceeds the national requirements, the requirements of BAS and IBER-BAS.

Dr. Tyufekchieva presented a list of 41 scientific publications, of which she participated in the competition with 29. Of these, 17 articles in journals with an impact factor Web of Science, 4 articles are indexed only in SCOPUS with the corresponding SJR, and 8 book chapters or collective monographs. The total number of citations is 194, most of them in journals in Web of Science or SCOPUS (126).

Dr. Tyufekchieva has a clearly defined profile of research work, focused, on the one hand, primarily

in faunistics, zoogeography, ecology and conservation status of order Plecoptera (Insecta), as well as related taxonomic decisions. The discussed problems and her ideas are relevant not only from a theoretical, but also from an applied aspect. The use of a holistic approach, as well as its available arsenal of modern methods, are the basis of its serious scientific achievements in the discovery, conservation and protection of the biological diversity of the stone flies, as well as of other groups of aquatic organisms.

It is not so easy to point out the most important scientific contributions in such a wide field of scientific work and interests. Several groups can be clearly defined.

Among the most important scientific contributions in the field of faunistics, zoogeography and related taxonomic problems are that order Plecoptera is a model object of the alpha-diversity of river bottom communities (macrozoobenthos) and an indicator of the ecological state of aquatic ecosystems. In this regard, the plecopteran fauna (Insecta) has been studied from almost the entire river network in Bulgaria. As a result of taxonomic and faunal studies and revisions by the candidate, 109 species of stoneflies have been recorded for the Bulgarian fauna. The taxonomic status of 2 genera, 6 species and 3 subspecies of stoneflies has been revised. The generic affiliation of *Capnia bifrons* (Newman, 1838) has been transferred to *Zwicknia* Murányi 2014. Three taxa have been raised to species status.

There are many and zoogeographically important new original faunistic data on over 30 taxa of stoneflies from the watersheds of 5 Bulgarian rivers, karst springs, glacial streams and lakes, located on the territory of the Eastern Aegean, Western Aegean, Black Sea and Danube River Water Basin Management regions and for 4 taxa from the Republic of North Macedonia.

The candidate has several important scientific contributions in the field of community ecology. They are related to an analysis of the composition, structure and dynamics of benthic organisms in surface continental waters. The accumulated data on the strict ecological features of the stoneflies associated with the physicochemical and hydromorphological characteristics of the water bodies elucidate the mechanisms of the formation and dynamics of the plecopteran communities in the river coenoses. The main contribution is the complex ecological evaluation of the species of Plecoptera and their indicator value in the ecological status of lotic water bodies. The statistical relationships were analysed and high and significant correlations were established regarding the assessment of water quality.

The applied contributions of the candidate are in the field of nature protection – related, on the one hand, to biodiversity and ecosystem functions and, on the other, to the water quality and assessment of the ecological status of water bodies. The publication of new data on poorly studied, rare and protected species of Plecoptera in vulnerable habitats, such as karst springs or mountain

rivers, is a significant contribution to the efforts of its conservation and the protection of the vulnerable stoneflies' habitats.

The candidate has been a key expert in many national projects for the mapping and monitoring of target aquatic invertebrate species, as well as for the study of biological quality elements /BQEs/ and their supporting physicochemical quality elements in selected potential reference points for the specific river and lake types.

Last but not least are the methodological contributions, expressed in a developed methodology for the characterization of continental surface waters. The candidate is one of the authors of the multi-habitat sampling method for benthic macroinvertebrate communities in different river types in Bulgaria. The method has become the sampling standard for hydrobiological studies in Bulgaria.

Her participation in the preparation and implementation of a large number of scientific and applied projects financed by Bulgarian and international institutions, as well as her successful field trips and joint initiatives with Bulgarian and foreign colleagues, unequivocally show that the candidate knows very well the principles of project-based research and successfully works in a team. She is a good team player and her always helping hand, creativity and academic approach are important part of the successful work with different people and she easily copes with leadershiptype tasks that arise.

Critical remarks and recommendations after reviewing the submitted documents: I noticed two self-citations (N 80 and 131 in the list). That doesn't change the compliance with the requirements for acquiring the academic position. The rest of the remarks are of a formal origin, such as the non-inclusion for this competition of all the candidate's publications and have no place in this opinion.

CONCLUSION

As a member of the Scientific Jury (established according Order No. 50/05.08.2024 of the Director of IBEI-BAN), I confidently state that the candidate Dr. Violeta Tyufekchieva, participating in the competition for the academic position of associate professor in professional direction 4.3 Biological sciences, scientific specialty HYDROBIOLOGY, for the needs of the research group "Bioindicators, monitoring and ecological classification of freshwater ecosystems", department "Aquatic ecosystems" of the Institute of Biodiversity and Ecosystem Research - BAS, announced in no. 48 of the State Gazette of June 7, 2024, meets the mandatory and specific requirements and criteria for occupying the academic position "associate professor".

The presented results and contributions from Dr. Tyufekchieva's research, organizational and teaching activities show her professionalism, creativity and competence in the scientific work. She has a fresh mind and her drive for research is inspired by her great curiosity; this, combined with the

use of modern methodology, places her in the group of scientists in Bulgaria working at a very high level. Dr. Tyufekchieva is a responsive colleague and a good person who is not afraid to share knowledge and ideas and help everyone in the team they work with. She is a good team player and her creativity and academic approach are important part of the successful work. This, without doubt, would be confirmed by each of the participants in any joint projects in which Dr. Tyufekchieva participated, as well as each of the organizing committee of international and national scientific forums who worked together with the candidate.

All of the above mentioned gives me the reason to recommend to the Scientific Jury to support the candidacy of Dr. Violeta Georgieva Tyufekchieva for the academic position of ASSOCENT PROFESSOR in Hydrobiology for the needs of the "Aquatic Ecosystems" department, IG "Bioindicators, Monitoring and Ecological Classification of Freshwater Ecosystems", IBEI - BAS.

30 of September 2024 Sofia Nikolay Simov