Вх. № 703-НО-05-06/06.08.2025 г.

STATEMENT

by Prof. Dr. Boyko B. Georgiev, DSc, Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences (IBER-BAS), on a competition for the academic position of Associate Professor in Area 4.3. “Biological Sciences (Ecology and Ecosystem Conservation)” for the needs of the Section “Community Ecology and Conservation Biology”, Department “Ecosystem Studies, Ecological Risk and Conservation Biology” at IBER-BAS, announced in the State Gazette No. 32/15.04.2025, with a single candidate Dr. Angel Dyugmedzhiev, Chief Assistant

Dr. Angel Dyugmedzhiev is the only candidate in the procedure for election of associate professor in the Research Area "Biological Sciences (Ecology and Ecosystem Conservation)" for the needs of the Section *Community Ecology and Conservation Biology* at IBER-BAS. He has a professional qualification "Master of Zoology" acquired in 2013 with excellent score (5.73/6.00 from the semester exams and 6.00/6.00 from the defence of the diploma thesis) at the Faculty of Biology of Sofia University "St. Kliment Ohridski". His first scientific communications dated from the same period and was in the field of viper ecology, showing the formation of a scientific interest in herpetology. In 2015, he joined the National Museum of Natural History, Bulgarian Academy of Sciences, as a doctoral student, where he developed a dissertation entitled "Spatial Ecology of the Viper (*Vipera ammodytes*) in Western Bulgaria", initially under the supervision of Assoc. Prof. Nikolay Tsankov, and after the untimely death of his supervisor – under the supervision of Prof. Pavel Stoev and Prof. Borislav Naumov. In 2020, he successfully defended his dissertation. He has been working at IBER–BAS since 2018, successively as a biologist, research assistant and chief research assistant.

During his research career, which began during his student years and continues successfully to this day, Dr. Dyugmedzhiev has participated in 27 research and applied science projects, which are primarily focused on the field of herpetology or have a broad profile in the field of biodiversity conservation. Dr. A. Dyugmedzhiev was the leader of five other projects, which were funded on a competitive basis by the Bulgarian National Research Fund or the National Research Programme "Young Scientists and Postdoctoral Fellows". Without a doubt, these data demonstrate the candidate's ability to work in a team and the trust he enjoys in the professional community – as a colleague who is competent, performs his work qualitatively and on time, and also is able to be a team-worker. These data also demonstrate his ability to attract external funding, both for the benefit of the institute and for funding his research.

I fully accept the statement of scientific contributions submitted by Dr. Dyugmedzhiev in connection with the present procedure. He has a clear thematic profile in the field of snake ecology and biology – a direction to which the majority of his publications and scientific contributions belong.

A significant emphasis in his work is research on the biology and ecology of the horned viper. His promotion statement in connection with the present procedure is based on these studies. On this topic, he studied the main types of arboreal behaviours, which are related to reproduction, feeding, thermoregulation and escape from enemies. This series of articles has been published in leading international journals, including journals with herpetological specialization.

A significant contribution is also the study of the genetic diversity of the populations of the horned viper in Bulgaria based on two mitochondrial markers. It proves the presence of two

distinct evolutionary lines – northeastern and southeastern. Within the southeastern group, southern and eastern subgroups have been revealed. A contact zone between the two lines has also been identified.

A series of three articles describe trends in the seasonal and diurnal activity of the horned viper depending on the age, sex and reproductive status of the individuals. Interpopulation differences in activity rhythms have been observed, which probably reflect the evolutionary adaptations of individual populations to local environmental factors. Another study is devoted to the thermoregulatory features of the viper in its natural environment, with a leading role also played by behavioural mechanisms based on changes in the behaviour of pregnant females.

The study of the chemical composition of the viper's skin secretions is also innovative, with a total of 59 compounds identified, including six ketones. Two of them are thought to play a leading role in chemical communication among individuals.

The examples I have selected and included in this statement are only a part of the contributions from the in-depth and innovative scientific research on snakes conducted by Dr. Dyugmedzhiev. In my opinion, they illustrate that the candidate is an active scientist with a clearly expressed research profile, an innovative approach and significant scientific contributions in the field of ecology, especially in the ecology and conservation of reptiles. His contributions have both basic basic importance for understanding the adaptations and reactions of the studied species to environmental dynamics as well as applied value allowing for the objective assessment of the conservation status of individual populations in diverse natural conditions.

It is remarkable that a significant part of Dr. Dyugmedzhiev's scientific output has been published in authoritative international journals with high criteria: Acta Herpetologica, Herpetozoa, Molecules, Biochemical Systematics and Ecology, Herpetological Bulletin, Herpetology Notes, North-Western Journal of Zoology, etc. The list of citations of Dyugmedzhiev in publications that are referenced in Web of Science and SCOPUS includes 49 items. In addition to them, Dr. Dyugmedzhiev is also cited in other journals (9 citations), books (3 citations) and journals that are not included in WoS or Scopus (9).

A careful acquaintance with the production of Dr. Angel Dyugmedzhiev convinced me that we have a well-prepared, active and purposeful candidate with a clear research profile in the field of herpetology, in particular in the ecology and conservation of reptiles (especially snakes). Considering the valuable scientific results achieved and my personal impressions of our colleague, I consider Dr. Dyugmedzhiev to be an active and capable scientist with significant scientific contributions. I believe that he has reached the necessary maturity and qualifications to occupy the academic position of "associate professor".

I have no critical remarks towards the candidate.

Based on the above, I strongly support the election of Dr. Angel Dyugmedzhiev as Associate Professor in the Research Area 4.3. “Biological Sciences (Ecology and Ecosystem Conservation)” for the needs of the Section “Community Ecology and Conservation Biology” at IBER-BAS.

6 August 2025

Signature:
Boyko B. Georgiev
Professor, PhD, DSc