

FD № 31/07.2017

STATEMENT

on the materials for participation in a competition for occupation of academic position “Associate Professor” in professional direction 6.5. Forestry, scientific specialty “Silviculture, including Dendrology”, announced by the Forest Research Institute at the Bulgarian Academy of Sciences (FRI-BAS)

Applicant to participate in the competition: Dr. Mira Lyubcheva Georgieva, Senior Assistant Professor

The statement was prepared by: Assoc. prof. D-r Svetoslav Mladenov Anev, University of Forestry, Sofia, Bulgaria.

1. Short biography of the applicant.

Dr. Mira Georgieva finished her Master’s in 2001, majoring in “Ecology, Conservation, and Restoration of the Natural Environment” at the University of Forestry (LTU), Sofia. Since 2003, he has been a doctoral student at the Department of Dendrology at LTU. In 2017, he successfully defended a dissertation on the scientific specialty “Forest Plantations, Selection, and Seed Production” on the topic “Study of genetic diversity of Oriental plane tree (*Platanus orientalis* L.) in Bulgaria”. Since 2017, he has been working as an ecological engineer, and since 2018 – as a chief assistant in the “Forest genetics, physiology, and plantations” section at the Forest Research Institute, Bulgarian Academy of Science.

2. Compliance of the submitted documents and materials of the applicant with the requirements in the Regulations for Development of Academic Staff at the Forest Research institute at the Bulgarian Academy of Sciences (FRI-BAS).

The documents and materials submitted for the competition are in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its application. They agree with the internal Regulations for the terms and conditions for acquiring a scientific degree and occupying academic positions at the Forest Research Institute – BAS. From the publications submitted in the reference, I consider that publications Г7.2 and Г7.6 refer to another scientific specialty, and I do not accept them as related to the present procedure. Conference papers numbered Г8.1; Г8.2; Г8.6; Г8.7; Г8.8; Г8.9; Г8.12; Г8.13; Г8.18; Г8.19; Г8.20; Г8.21; Г8.22; Г8.23; Г8.24; Г8.25; Г8.26, and Г8.27 I accept with a particular opinion, expressed in the fact that for the proceedings in which the reports are published, no ISBN/ISSN is indicated, which makes it impossible to check for the scientific peer-review/editing required for this group. With the reduction of points from publications Г7.2 and Г7.6, I accept as indicator Г7 – 61 points or a total for group Г – 200.3 points. I recognize the candidate’s total number of points as 647.9, above the minimum 500 for the competition.

3. General description of the presented materials.

Dr. Mira Georgieva has submitted the required materials for participation in the competition for Associate Professor fully, which gave the admission committee reason to admit her to participate. The reference list of scientific production contains 44 titles - 3 for Ph.D. studies, 3 for the “senior assistant” competition, and the remaining 38 - for the present competition, of which 36 were evaluated in the opinion (excluding Г7.2 and Г7.6). The publications that were assessed in this statement are distributed as follows: 16 issues in publications that are referenced and indexed in world-renowned scientific information databases, 5 of them are with Scimago Journal & Country Rank, and 0 in Web of Science impact-factor journals. The remaining 30

publications are papers published in conference proceedings or edited collective volumes. The candidate has also presented participation in three projects - 1 international and two national.

4. Main directions in the candidate's research work and the most important scientific and scientific-applied contributions.

The candidate's scientific contributions can be summarized in the following areas:

1. Population-genetic studies of the Oriental plane tree in Bulgaria

1.1. Genetic differentiation

1.2. Variability of Oriental plane leaves

1.3. Risks when applying methods to protect genetic resources in rare species

For the first time, a comprehensive study of the genetic diversity of three populations of the Oriental plane tree in Bulgaria was carried out based on neutral markers and quantitative traits such as leaf morphometric indicators. Some risks are assessed, and a recommendation is made for a complex (in-situ and ex-situ) approach to conserving genetic diversity in species with limited and fragmented areal.

2. Floristic, dendro-floristic, and dendrological studies

2.1. Morphological and anatomical studies

2.2. Horological studies

2.3. Floristic and dendro-floristic studies

2.4. Surveys of invasive alien species

The changes in the anatomical and morphological indicators of the species *Ligustrum vulgare* L., *Impatiens glandulifera* Royle, and albinism in *Vaccinium vitis-idea* L. have been studied. Some of the studies have a practical-applied nature and strengthen the role of science in expert activities. New localities of several species have been established on the part of Lozenska and Plana Planina, as well as on the territory of the Danube islands Aydemir and Vetren. Many of the established species are invasive and/or species with conservation status. Floristic surveys were conducted in various characteristic habitats and territories with anthropogenic impact: in the region of Petrich, Kresna, Ivaylovgrad, and Melnik (for *Platanus orientalis* L.); in the Sofia area - Lozenska, Plana, Vitosha, and Stara Planina (for *Pinus nigra* Arn. and *Fraxinus ornus* L.).

A study of the dendroflora of Lozenska Planina was carried out in terms of ecological features and convertibility of the main edificers, through which the author found increased invasiveness of the *Carpinus orientalis* and *Fraxinus ornus* and greater tolerance of species of the genus *Quercus* to more xeric conditions of the environment. The honey-bearing dendroflora of Lozenska Planina was also studied. An interesting study (Г 8.13) presents the risks of destroying the habitats of conservation-important species. The distribution of the Himalayan balsam (*Impatiens glandulifera* Royle) along the Iskar River between Lozenska Planina and Plana Planina was studied. A methodological approach has been developed for monitoring and analyzing the resource potential of the species populations. Studies have been conducted on the measures to combat and limit the spread and the restrictions related to the nature protection status of the territories in which the species invade. The main competitors of *Impatiens glandulifera* were found in an experimental section of the Iskar Gorge. The biological and ecological features of the potentially invasive alien species *Lupinus polyphyllus* Lindl. on the territory of Lozenska Planina. A Joint Electronic Database has been developed, including information on biological diversity in the cross-border region between Bulgaria and Serbia.

3. Phytocoenological studies

A study of ruderal communities in the region of Ravda and Nessebar, which are subjected to permanent anthropogenic pressure, was carried out. Phytocoenotic studies were conducted in

Pinus nigra plantations with an undergrowth of *Fraxinus ornus* around Sofia city - Vitosha, Plana, Lozenska planina, and Stara Planina. The map of the potential vegetation in the gorge of the Iskar River between Plana and Lozenska Planina has been updated. Synanthropization in forest belts in the Knezha region was evaluated.

5. Reflection of the applicant's scientific activity in the literature.

The candidate has reported 11 citations in a total of 8 scientific papers. Two of the citations are in scientific journals referenced and indexed in world-renowned databases of scientific information. There are seven citations in a total of 5 collective volumes with scientific review. Two citations are reported in a peer-reviewed scientific publication in a non-refereed journal.

No Web of Science account was found. Only two publications are noted in the Scopus profile, one of which (B4.6) is cited twice. The H-index in Scopus is 1. Applicant's ORCID not found. No applicant's account was also found in Google Scholar. Dr. Mira Georgieva's ResearchGate profile has 25 publications, of which 22 are listed in journals and three in conference proceedings. The profile has 2928 hits, 304 full-text reads, 530 abstract reads, and 20 citations (excluding self-citations). The RIS index (research interest score) is 87.1.

6. Participation in scientific projects.

Dr. Mira Georgieva reports participating in two national and one international project in the competition. One of the national projects – “Tree species, genotypes and technologies to accelerate the production of biomass and quality wood, to improve the landscape and protect the environment”, is incorrectly listed as a stand-alone project but is actually a topic of a larger project “Investigating the growth and productivity of fast-growing broadleaf species in experimental plantations under a modified Nelder design”.

7. Assessment of the applicant's educational activities

The candidate does not perform educational activities.

8. Assessment of the applicant's personal contribution.

From the submitted publications, it is not clear the candidate's contribution to any of them (except personal ones). I assume that the co-authors are equally contributing since nothing else is indicated. Many co-authored publications testify to the candidate's ability to work in a team.

9. Critical notes and recommendations.

I have no significant critical comments on the candidate's publications. My recommendations are related to several aspects that I believe will be useful in the candidate's future scientific activity:

1. I recommend Dr. Georgieva create registrations in Web of Science, ORCID, and Google Scholar and keep her profiles up-to-date in the other scientific information-sharing platforms – Scopus, ResearchGate, and BPOS. This will contribute to greater visibility and more frequent coverage of the results of its scientific production.

2. I recommend Dr. Georgieva to continue presenting her scientific results at conferences but to publish the essential part of them in journals indexed and referenced in world-renowned scientific information databases.

3. I recommend Dr. Georgieva take advantage of the international projects on which the Forest Institute has a strong tradition, create contacts with scientists in her field, and publish her research results in international co-author groups.

4. I recommend Dr. Georgieva strengthen her work with Ph.D. students and pass on the accumulated theoretical and experimental experience through consultations.

10. Personal impressions.

I do not have personal impressions of the scientific work of Dr. Mira Georgieva. My statement is based entirely on the presented materials for the competition.

11. Conclusion.

The candidate for the competition chief assistant prof. Dr. Mira Lyubcheva Georgieva meets the minimum conditions and requirements for holding the academic position of “associate professor” at the Forest Research Institute at the Bulgarian Academy of Science, as evident from the presented materials.

Related to the above, I propose Chief Assistant Prof. Dr. Mira Lyubcheva Georgieva be elected as an “Associate Professor” in professional field 6.5 “Forestry”, scientific specialty “Silviculture (incl. Dendrology)” at the Forest Research Institute - Bulgarian Academy of Sciences.

Statement delivered on: 31.07.2023

Author of the statement:

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