



## REVIEW

On the materials for participation in a competition for the occupation of the academic position "Professor", in the field of higher education 6. Agricultural sciences and veterinary medicine, Professional Field 6.5. Forestry, scientific specialty "Forestry (incl. Dendrology)", in the discipline "Phytocoenology", announced by the Forestry University in SG No. 26/21.3.2023, procedure code FOR-P-0223-102

### **Candidates for participation in the competition are:**

Only one candidate submitted documents for participation in the competition for occupying the academic position of "Professor", announced by the University of Forestry with procedure code FOR-P-0223-102.

#### **1. Assoc. Prof. Marius Alipiev Dimitrov, Ph.D.**

**Reviewer: Nikolay Ilchev Velev, Ph.D.,** Assoc. Prof. of Professional Field 4.3. Biological Sciences from the Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences

#### **1. Short biographical data on the applicant**

Marius Alipiev Dimitrov was born on 20.05.1966 in the city of Vratsa. From 1986 to 1991, he was a Forestry University student. He graduated in 1991 with a specialty in Forestry - Forestry Engineering. In the period 2002 - 2004, he was a Ph.D. student at the University of Forestry, Sofia, on a scientific specialty 04.04.03. "Forestry (incl. Dendrology)". In 2004, he successfully defended his dissertation work on the topic "Floristic classification of vegetation in the Educational and Experiential Forestry "G. St. Avramov" - Yundola". From 1994 to 2006, Marius Dimitrov successively held the academic positions of "Assistant", "Senior Assistant" and "Chief Assistant" in the Department of Dendrology at the Faculty of Forestry at the University of Forestry, Sofia, conducting laboratory exercises and teaching practices in Phytocoenology, Botany, and Phytomonitoring. From 2006 until now, he holds the academic position of "Associate Professor" at the same university as a lecturer in the disciplines of Phytocoenology and Botany. From 2007 to 2016, he was the Deputy Dean for Academic Activities of the Faculty of Forestry, and from 2016 until now he is the Dean of the Faculty.

From his appointment as an "Assistant" at the University of Forestry until today, Assoc. Prof. Marius Dimitrov, Ph.D., has over 28 years of professional experience in the field of flora, vegetation, and natural habitats research, biodiversity conservation, management plans for protected areas, determination of forests of high conservation value, etc. Assoc. Prof. Marius Dimitrov, Ph.D., is the author and co-author of over 80 scientific publications. He speaks French and English and freely uses conventional (Microsoft Office) and specialized software such as SYNTAXA, BIO-DIV, STATISTICA, etc. He has certificates for Assessment of forests and lands from the forest fund, Faculty of Forestry, University of Forestry and Advocacy Training and Transdisciplinarity, BSFP Training Programme.

#### **2. Correspondence of the submitted documents and materials of the applicant according to the Rules of the Development of Academic Staff at the University of Forestry**

The submitted documents and materials of the candidate Assoc. Prof. Marius Alipiev Dimitrov, Ph.D., meet the conditions of Art. 65, para. 1 of the Regulations for the Development of the Academic Staff at the University of Forestry, as well as the minimum national requirements

under Art. 2b, para. 2, 3, and 4, defined in the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations to it. The information in the presented documents is comprehensive and precisely arranged. The candidate meets all statutory requirements for participation in the announced competition for the academic position "Professor", announced by the University of Forestry in SG No. 26/21.3.2023 with procedure code FOR-P-0223-102.

### **3. Assessment of the candidate's educational and teaching activities**

Associate Prof. Marius Dimitrov, Ph.D., has over 28 years of work experience as a teacher at the University of Forestry - Dendrology Department of the Faculty of Forestry, as "Assistant", "Senior Assistant", "Chief Assistant" and currently "Associate Professor". As an assistant, he led exercises and educational practices in Phytocoenology, Botany, and Phytomonitoring. Today, as an Associate Professor, he gives lectures on Botany and Phytocoenology, in which students learn about the anatomy, morphology, and systematics of plants, as well as the rules in the formation, development, distribution, and systematics of plant communities.

Associate Prof. M. Dimitrov, Ph.D., was the academic supervisor of graduates of the Bachelor's and Master's degree programs, as well as successfully defended Ph.D. students. He was an Academic Mentor of three students (Project BG051PO001-3.3.07-0002 "Student Practices"), and also a member of eight scientific juries and commissions for competitions for academic positions and Ph.D. defenses. He participated in the development of e-learning materials for a module from the discipline "Botany", included in the program of the Landscape Architecture specialty - Project BG051PO001-4.3.04-0052/ "Development of a center for electronic forms of distance learning at the University of Forestry".

Marius Dimitrov, Ph.D., has held the academic position of "Associate Professor" at the University of Forestry since 2006, which significantly exceeds the minimum requirements for holding the position of "Professor" listed in Art. 65, para. 1, item 2 of the Rules of the Development of Academic Staff at the University of Forestry.

He holds certificates for Methodology of academic training, ed. of the University of Forestry and Employment training at the University of Forestry and Training for the operation and maintenance of the Blackboard Learn™ e-learning platform", ed. of the University of Forestry. From 2007 to 2016, Assoc. Prof. Marius Dimitrov, Ph.D., was the Deputy Dean for Academic Activities of the Faculty of Forestry, and from 2016 until now he is the Dean of the Faculty.

Associate Prof. Marius Dimitrov, Ph.D., is the co-author of several university textbooks and manuals of educational and practical importance, among them a Manual for exercises in Botany (two editions), a textbook on Botany, a textbook on Phytocoenology, a Guide for determining the habitats of European importance in Bulgaria, a Guide for restoration and management of riparian forest habitats in Bulgaria, etc.

A positive assessment can be given to the long-term teaching and learning activities of Assoc. Prof. Marius Dimitrov, Ph.D., at the University of Forestry. He is an established teacher, with high professional competence, who has earned the respect of his colleagues and students and is fully worthy of holding the academic position of "Professor" at the University of Forestry.

### **4. Evaluation of the candidate's scientific, scientific-applied and publication activity**

Candidate Assoc. Prof. Marius Alipiev Dimitrov, Ph.D., participates in the competition with the following materials:

- V4. Habilitation thesis - scientific publications (not less than 10) in publications, referenced and indexed in world-renowned databases with scientific information – **10 nos.**
- G6. A published book based on a defended dissertation for the award of the educational and scientific degree "Doctorate of Philosophy" (Ph.D.) – **1 no.**

- G7. Papers and reports published in scientific editions, referenced and indexed in world-renowned databases of scientific information – **4 nos.**
- G8. Papers and reports published in non-referenced peer-reviewed journals or published in edited collective volumes – **11 nos.**
- G11. Published chapter of collective monograph/book – **13 nos.**
- D13 + D14 + D15. Citations – **over 200 nos.**
- E17. Guidance of a successfully defended Ph.D. student – **2 nos.**
- E18. Participation in a national scientific project – **4 nos.**
- E19. Participation in an international scientific project – **2 nos.**
- E22. Published university textbook – **2 nos.**
- E23. Published university practice textbook – **1 no.**

Additional materials:

Practical guides – **4 nos.**

Popular science papers and books:

Books – **3 nos.**

Papers – **6 nos.**

Participation in international symposia and conferences – **25 nos.**

Scientific research and applied works – **54 nos.**

Other activities – **12 activity types**, among which: participation in organizing international scientific conferences, participation in editorial boards of scientific journals, scientific expertise, participation in national councils, working groups and departmental commissions, etc.

#### **4.1. Participation in scientific, scientific-applied and educational projects**

Associate Prof. M. Dimitrov, Ph.D., has participated in the implementation of six research projects, one of which has two stages of implementation. Of these, four are national and two international. National projects focus on flora and vegetation research, as well as the development of concepts and implementation of regional silvicultural systems for the management of different types of forest stands. The topics of the international projects concern the conservation of biological diversity in lands of high nature value and the creation of a Red list of European natural habitats.

Additionally, Assoc. Prof. M. Dimitrov, Ph.D., participated in the development of 54 research and applied works with national and international funding, some of them also on a project basis. These works concern a wide range of topics, such as determination and inventory of the flora and vegetation of forests of high conservation value, determination and mapping of forest habitat types and plant species for the Important Bird Areas (IBA), characterization and criteria for evaluating the favorable conservation status of natural habitats, creation of a GIS database and system for monitoring biological diversity, development of a Guide for restoration and management of riparian forests, studies on the flora and vegetation of selected areas, inventory and mapping of ecosystems, biotopes and plant communities, etc.

#### **4.2. Characteristics of published scientific results**

The candidate for the competition, Assoc. Prof. Marius Dimitrov, Ph.D., has presented a total of 42 publications, which are evaluated by points and meet the minimum national requirements defined in the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations to it.

The candidate's publications can be classified as follows:

- **By type:**

Monographs/books (chapters of monographs/books) – **14 nos.**

[G6: 1; G11: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

Publications in scientific journals – **21 nos.**

[V4: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; G7: 1, 2, 3, 4; G8: 1, 6, 7, 8, 9, 10, 11]

Publications in edited collective volumes – **4 nos.**

[G7: 2, 3, 4, 5]

Textbooks and manuals – **3 nos.**

[E22: 1, 2; E23: 1]

- **By importance and place of publication:**

Publications referenced and/or indexed in world-renowned databases – **14 nos.**

- Publications in journals indexed in Web of Science with IF – **7 nos.**

[V4: 2, 3, 4, 6, 8, 9; G7: 4]

- Publications in journals indexed in Scopus with SJR – **3 nos.**

[V4: 5, 7, 10;]

- Publications in journals without IF and SJR – **4 nos.**

[V4: 1; G7: 1, 2, 3]

Non-referenced peer-reviewed publications – **28 nos.**

[G6: 1; G8: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; G11: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; E22: 1, 2; E23: 1]

- **Language of publication:**

- Publications in Bulgarian – **22 nos.**

[G6: 1; G8: 1, 2, 3, 5, 10, 11; G11: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13; E22: 1, 2; E23: 1]

- Publications in English – **20 nos.**

[G4: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10; G7: 1, 2, 3, 4; G8: 4, 6, 7, 8, 9; G11: 12]

- **Number of co-authors:**

- Standalone – **3 nos.**

[G6: 1; G8: 2; G11: 4]

- With one co-author – **13 nos.**

[V4: 2, 3, 9, 10; G8: 1, 5, 7; G11: 1, 3, 5, 6, 7, 8]

- With two co-authors – **7 nos.**

[V4: 1; G7: 2; G11: 2, 10, 11, 12, 13]

- With three or more co-authors – **19 nos.**

[All other publications]

#### **4.3. Reflection of the candidate's scientific activity in the literature (Citations)**

More than 200 citations are reflected in the materials submitted by the candidate for the competition. They are distributed as follows:

A total number of established citations – **208 nos.**

Citations in scientific publications, referenced and indexed in world-renowned databases of scientific information or in monographs and collective volumes – **138 nos.**

Citations in peer-reviewed monographs and collective volumes – **9 nos.**

Cited in non-referenced peer-reviewed journals – **61 nos.**

The established over 200 citations in national and international publications unequivocally speak of the high quality of the scientific work of Assoc. Prof. Marius Dimitrov, Ph.D.

#### **4.4. Contributions in the candidate's works (scientific, scientific-applied, applied)**

The materials provided by Assoc. Prof. Marius Dimitrov, Ph.D., for participation in the competition for the academic position "Professor" do not include the works from the last competition for the academic position, as well as from the candidate's last defended dissertation.

A reference to the contributions in the candidate's works shows that they can be grouped into three main areas: Flora and Vegetation, Natural Habitats, and Education and Science. Some of the more significant contributions can be summarized as follows:

##### **Flora and Vegetation**

###### Contributions to the field of floristic studies

- Scientific aspect

The floristic diversity of Slivenska Mt. has been established. Eighty-four species were newly established. It has been proven that the flora of Slivenska Mt. meets the elementary flora criteria. Eighty-four complexes dominated by peat mosses were studied on the territory of the Vitosha Nature Park.

- Applied aspect

The threats to the natural flora of Slivenska Mt. and to the peatlands of the Vitosha National Park have been identified, and recommendations have been made for their protection.

###### Contributions to the field of vegetation classification and characterization

- Scientific aspect

A complete syntaxonomic scheme of the plant communities in Bulgaria was developed according to the Braun-Blanquet system. Revision and validation of some problematic syntaxa described in Bulgaria were made.

Classification and ordination of different types of forest phytocoenoses have been made. Eleven associations and 4 sub-associations new to science were described. For the first time in the country, the alliances *Alnion incanae* and *Brachypodio pinnati-Juniperion comminus* (Slivenska Mt.) have been confirmed. The taxonomy of horse chestnut forests on the territory of the Balkan Peninsula has been established, and a new scientific association with horse chestnut phytocoenoses from Bulgaria has been described.

- Applied aspect

The Balkan vegetation database was created, with over 18,000 relevés in it. The relationships between forest phytocoenoses and natural habitat types were established.

###### Contributions to the field of vegetation dynamics

- Scientific aspect

Vegetation dynamics in different types of grassland, shrub, and forest phytocoenoses were studied. Vegetation dynamics as a result of the impact of various abiotic and anthropogenic factors were analyzed and the main successional orders and series of communities in Slivenska Mt. were outlined. Succession processes in forest communities that took place after a wind wave (wind wave spots) in the Yundola area (Rilo-Rhodope massif) were traced.

- Applied aspect

Recommendations have been made for monitoring of vegetation dynamics to avoid undesirable degradation processes in the vegetation.

###### Contributions to the Bioproductivity of Forest Communities

- Scientific aspect

The productivity of two types of beech forests was evaluated - natural habitats with codes

9110 and 9130. The productivity of beech forests under the influence of various abiotic and anthropogenic factors was studied.

- Applied aspect

Knowledge (data) about the bioproductivity of beech forests is relevant and may be useful in the planning and implementation of some silvicultural activities.

### **Natural habitats**

#### **Contributions to the field of identification, characterization, and mapping of natural habitats**

- Scientific aspect

A GIS model has been developed for the determination and mapping of natural habitats from Annex 1 of Directive 92/43 in Bulgaria. A combined application for vegetation mapping and classification using the Braun-Blanquet method was proposed. Seventeen types of natural habitats have been identified, mapped, and characterized from the territory of the "Central Balkan" NP, and four types (S913, T12116, T19B13, T1C133) are indicated for the first time for the territory of the Park. The structure and content of the articles on natural habitats in the publication Red Book of the Republic of Bulgaria, Volume 3, have been determined. Current information is presented on 17 forest types and 6 grassland types of natural habitats.

- Applied aspect

The distribution of several natural habitats is mapped based on GIS models. Recommendations are made for habitat maintenance and improvement.

### **Education and science**

- Scientific aspect

The quality and applicability of forestry education were analyzed. The main problems of education were outlined, and possibilities to overcome them were indicated.

- Applied aspect

Based on the results obtained from the survey of 83 forestry institutions, an opportunity was created to optimize forestry training at the University of Forestry.

## **5. Evaluation of the candidate's contribution**

The submitted materials for the competition for the academic position "Professor" are undoubtedly the work of the candidate Assoc. Prof. Marius Dimitrov, Ph.D. They include three standalone publications and 13 with one co-author, which is unequivocal evidence of the applicant's substantial contribution and equal participation with the other co-authors of the publications. Ten of the publications are in journals with Impact Factor and/or Impact Rank (7 in Web of Science journals with IF and 3 in Scopus with SJR). The publications of Assoc. Prof. M. Dimitrov, Ph.D., have over 200 citations in national and international publications. The high citation rate of these publications unequivocally indicates the high quality of the scientific work in them and is evidence of the wide recognition, by the national and international scientific community, of the candidate's works.

## **6. Critical notes and recommendations**

I have no significant critical comments on the documentation submitted for the competition! The materials are prepared and assembled in a precise manner.

On a positive aspect, it can be noted that the applicant has 7 papers in Web of Science journals with IF, not 5, as declared in the documentation presented. Since 2022, the journal HACQUETIA has an Impact Factor (Journal Citation Reports: Journal Impact Factor of HACQUETIA (2022) = 0.5). Consequently, the following two papers have an Impact Factor also:

Mandžukovski, D., Teofilovski, A., Andreevski, M., Čušterevska, R., Tzonev, R. & DIMITROV, M. 2022. Relationships between the vegetation of Macedonian pine (*Pinus peuce* Griseb.) and different types of soils on which is developing. HACQUETIA, 21 (1): 89–106.

Nikolov, I., DIMITROV, M. 2023. Forest habitats on the territory of the National Park „Central Balkan” Bulgaria. HACQUETIA. DOI: 10.2478/hacq-2022-0021.

## 7. Personal impressions

I have personally known Assoc. Prof. Marius Dimitrov, Ph.D., since 2009 when I led a summer practicum with students from the University of Forestry. I have been interested in his works and publishing activities over the years due to shared professional interests in grasslands and natural habitats. Associate Prof. M. Dimitrov, Ph.D., is an established university teacher and an extremely good professional, attentive and responsive to his students and colleagues. He is characterized by modesty, consistency, hard work, and excellent communication skills. His deep knowledge in the field of phytocoenology and good communication skills allow him to be both a first-class scientist and an excellent teacher. I highly value the scientific and scientific-applied contributions of Assoc. Prof. M. Dimitrov, Ph.D., and I am fully convinced that he is a fully worthy candidate to take the position of "Professor" and that he will attract young scientists to ensure the personnel development of the University of Forestry and in particular of the Faculty of Forestry.

## 8. Conclusion

After a thorough inspection of the documentation submitted for the competition, I **RECOMMEND** that the candidate Assoc. Prof. Marius Alipiev Dimitrov, Ph.D., be elected as a "Professor" in the discipline "Phytocoenology" from Professional Field 6.5. Forestry, scientific specialty "Forestry (incl. Dendrology)".

Reviewer's signature: \_\_\_\_\_

Review submitted on: 21.7.2023 г.

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Review submitted on: 21.7.2023 г.