

-STATEMENT

for the research and teaching activity

of Assoc. Prof. PhD Rosen Todorov Tsonev

for participation in a competition for the "professor" academic position

by Prof. PhD Assen Ivanov Assenov,

from the Department of Landscape Ecology and Environmental Protection at the Faculty of Geology and Geography of Sofia University "St. Kliment Ohridski",

appointed as a member of the scientific jury by Order № RD-38-569/03.12.2020 of the Rector of Sofia University "St. Kliment Ohridski" for conducting a competition for a professor in the professional field 4.3. Biological sciences (Ecology and protection of ecosystems - Phytocology) for the needs of the Biology Faculty, announced in SG, issue 88 of 13.10.2020 on the grounds of Art. 4 and Art. 29a of the Law for the development of the academic staff in the Republic of Bulgaria, Art. 60 et seq. of the Regulations for application of the Law for the development of the academic staff in the Republic of Bulgaria, Art. 118 para. (1) and (3) of the Regulations on the terms and conditions for acquiring scientific degrees and holding academic positions at Sofia University "St. Kliment Ohridski" and decision of the Faculty Council of the Faculty of Biology, protocol № 13 from 10.11.2020.

The competition is requested by the Department of Ecology and Environmental Protection at the Faculty of Biology of Sofia University "St. Kliment Ohridski" and published on the official website of the Faculty of Biology in the required time period. The only candidate in the competition is Assoc. Prof. PhD Rosen Todorov Tsonev, a lecturer at the same faculty. This statement is prepared on the basis of a decision of the scientific jury, adopted at a meeting on 23.12.2020. The documentation submitted by the candidate meets the requirements of both the Law for the Development of the academic staff (with the amendments as of 25.02.2020), the Regulations for application of the Law for the development of the academic staff in the Republic of Bulgaria (SG from 19.02.2019), as well as the Regulations on the terms and conditions for acquiring scientific degrees and holding academic positions at Sofia University "St. Kliment Ohridski" (as amended on 27 May 2020). Technically, the documentation is designed and arranged exactly in accordance with the description in the Application for participation in the competition, which greatly facilitates the work with the attached documentation.

1. Professional experience.

Rosen Tsonev (born on January 29, 1973) graduated from Sofia University "Kliment Ohridski" in 1998 with a master's degree in Ecology. He has a PhD degree in the scientific field (06.01.03.) - Botany with a diploma № 28 767 from 02.01.2004.

During his professional development at the Faculty of Biology of Sofia University R. Tsonev passed through all positions from assistant (October 8, 2002 - 2004) to senior assistant (2004 - 2006), chief assistant (2006 - 30.01.2011) and associate professor (31.01.2011 - until now). The last position is in the scientific specialty 02.22.01. Ecology and protection of ecosystems (Certificate № 26 811 of 31.01.2011).

Assoc. Prof. R. Tsonev has 18 years and 1 month of work experience as a lecturer at the Faculty of Biology of Sofia University "St. Kl. Ohridski", a period in which he has demonstrated

significant scientific results in research, related to the identification, classification and mapping of plant communities and natural habitats in Bulgaria, included in NATURA 2000 ecological network, as well as modeling their potential distribution based on existing databases.

2. Teaching activity.

Especially important for the assessment of Assoc. Prof. Rosen Tsonev in his participation in the competition for a professor is his teaching work. Already as a full-time doctoral student in 1999 he led practical classes (exercises) in Systematics of Higher Plants, majoring in Biotechnology at the Department of Botany, Faculty of Biology at Sofia University "St. Kliment Ohridski". He has lectured in compulsory subjects, including: Protected areas and preservation of biological diversity" for the specialty Biomangement and sustainable development (bachelors - full-time training), Environmental protection - masters (regular training), Ecotourism (masters - part-time training), Phytoecology - Ecology (masters - full-time and part-time education), as well as for non-specialists - Biogeography - Ecology (bachelors part-time and full-time education), Fundamentals of ecology - Ecochemistry (bachelors, full-time), and the elective course in Methods of Ecological Research - Ecology (bachelors, full-time and part-time). The average annual teaching employment of Assoc. Prof. R. Tsonev for the last 5 academic years (from 2014 to 2020) is respectively 517.8 hours total and 386.6 hours classroom workload.

Rosen Tsonev has tutored 14 graduates and one doctoral student, and is a lecturer in 6 basic courses at Sofia University in the field of ecology and environmental protection. He is currently the supervisor of one doctoral student and co-supervisor of two more.

3. Scientific results.

3.1. Publication activity.

Assoc. Prof. R. Tsonev participates in the current competition with 50 pieces of scientific works (C4-6 pieces + D7-18 pieces + D8-5 pieces + D0-16 pieces + D0-4 pieces + indicator 19-1 piece = 50), diverse in volume and nature, correctly reflected in the attached documents. All submitted materials clearly prove that his research activity is in the field of the announced competition. The list of publications is sorted by the following indicators:

Indicator **C.4** includes three publications in journals with Q1, two publications in journals with Q2 and one with Q3.

Indicator **D.7** includes 18 scientific works in publications that are referenced and indexed in world-famous databases of scientific information, where with Q 1 are two publications, with Q 2 - also two publications, with Q 3 are 7 publications, with Q 4 are 6 publications and one (17.9) has an SJR of 0.17.

Indicator **D.8.** includes 5 published book chapters.

Under indicator **D.0.** 16 scientific publications are included without quartile and SJR, but in international journals referred to in other databases, which are not enlisted among the publications of Assoc. Prof. Dr. Rosen Tsonev for the fulfillment of the criteria of the Law for the development of the academic staff, but are incorporated in the scientific contributions.

To the same indicator **D.0.** four more publications with more than 30 co-authors are presented, not enlisted among the publications of Assoc. Prof. Dr. Rosen Tsonev for the fulfillment of the criteria of the Law for the development of the academic staff, but are considered in the scientific contributions. In my opinion these two groups of publications of category D.0. (without quartiles) and of category D.0. (with more than 30 authors), regardless of the fact that they do not fall within the criteria of the Law for the development of academic staff,

should be considered as part of the overall scientific production of Assoc. Prof. R. Tsonev, with which he participates in the competition for a professor.

Indicator 19. Includes a published university textbook - 1 piece.

These papers were published after the award of the doctoral degree and after taking the academic position of "associate professor". Of all the works (50) submitted for the competition, 47 (94%) are in English and only 3 (6%) are in Bulgarian. Assoc. Prof. R. Tsonev is the leading author in 19 (38%) of these publications, in 12 publications (24%) he is the second author. In another 7 publications (14% of the papers) he is the third author, in 3 publications (6% of the papers) he is fourth in order, and in the remaining 9 publications he is in the next position. I should note that these subsequent positions are in articles with greater number of authors, where the list of authors is often in alphabetical order.

In view of the period of publication of the works for the competition, 2011-2020, it can be stated that the average annual publication activity of the candidate is 5 publications per year, the highest being the number of publications in 2017 (8 in total). It should be noted that having in mind the large teaching and administrative workload of Assoc. Prof. R. Tsonev, this is a high activity that deserves a positive assessment. According to the attached list, in addition to the presented textbook and chapters from published monographs (5), it also includes articles in a series (19) and participation in conferences (34, of which 33 with section reports, and in 15 of them R. Tsonev is the sole author). The articles in a series and the participation in conferences are not included in the list of publications for participation in the competition for a professor, which further strengthens the conclusion about his exceptional scientific commitment in the period 2011-2020. The total number of publications of Assoc. Prof. R. Tsonev is 134: 7 books, 16 book chapters, one textbook, 2 training books, 80 articles in scientific journals, 19 articles in scientific series (mainly in the Red Book of the Republic of Bulgaria, 2015), 8 articles in conference proceedings and one popular science article. Of these, a total of 50 publications are presented in the current competition for a professor, including 43 publications in scientific journals, 6 books and one textbook.

3.2. Participation in research projects.

The reference provided by the candidate in the competition for a professor shows that the total number of participations in research and applied research projects is 29, with prevailing projects at national level (23). The international projects are 6 and the relevant documents are attached according to the requirements. The predominant part of the projects are financed by OP "Environment" - 8; 5 projects - from NSF at Sofia University; 3 projects from HOLSIM AD; 3 projects from the LIFE program, one - the Bulgarian-Swiss program and one - from the Agricultural Academy; respectively the FM of the EEA, NSF, Altera Wageningen, OP Southeast Europe, WWF - Danube-Carpathian Program, Sofia Municipality and the Public Board of TELUS International in Bulgaria are the source of funding for 8 projects. The scientific-applied projects are 22, and the research projects are 7. The attached reference for "E" shows that the candidate has scored a total of 310 points, respectively 270 for E14 and 40 points for E15.

3.3. Summary of published scientific results.

The candidate participates in the competition with a total of 50 scientific publications as 20 of them do not correspond to the criteria in the Regulations for application of the Law for the development of the academic staff, but have to be considered as part of the overall scientific production of Assoc. Prof. R. Tsonev in the competition for a professor, as they are included in the scientific contributions. All submitted publications on the topic of the competition are

included in the comments on the contributions. The papers under item C4 have been published in 3 journals: Applied Vegetation Science - 3 pieces; Plant Biosystems - 2 pieces, Phytocoenologia - one; publications under indicator D7 - have been published in 14 journals: Comptes rendus de l'Academie bulgare des Sciences, Silva Balcanica, Acta zool. bulg. - 3 pieces, Bulgarian Journal of Agricultural Science - 2 pieces, Acta Oecologica, IOP Conference Series Earth and Environmental Science, Turkish Journal of Zoology, Hacquetia - 2 pieces, Journal of Ecology, Applied Vegetation Science, Botanica Serbica, Acta Bot. Croat, Forestry Ideas. The additional publications are published mainly in Phytologia Balcanica - 11 pieces, also Historia naturalis bulgarica and Journal of Balkan Ecology.

The total IF and SJR of these publications is 32.744 and 1.49, respectively; H-index: 9 (Scopus) and 17 (Google Scholar).

3.4. Reflection of the candidate's publications in the scientific literature.

In the attached materials Assoc. Prof. R. Tsonev has included 430 citations, 247 of which are in Scopus and Web of Science, and 163 are in other sources. From the attached list of citations of the candidate it is understood that approximately 53% of his scientific works are cited. The average number of citations per publication is 9. The following publications are the most cited ones: Tzonev, Dimitrov, Roussakova (2009) - 57 times; Tzonev et al. (2006) - 34 times; Tzonev, Dimitrov, Roussakova (2005) - 26 times and Douda et al. (2016) - 26 times.

4.4. Scientific contributions of the candidate.

The contributory nature of the presented publications is subordinated to two main directions: 1. Inventory and standardization of the classification of vegetation and 2. Revision of large plant types. It should be emphasized that R. Tsonev is one of the leading researchers of vegetation in Bulgaria using the Brown-Blanquet methodology and his scientific results constitute a significant share in the volume of phytocenological research, which brings us closer to European standards.

Assoc. Prof. R. Tsonev has divided his scientific contributions into two categories: 1. Main scientific contributions, including phytocenological revisions and inventories and 2. Contributions in scientific papers under indicators' group D, where, in addition to phytocenology, differentiation of three more scientific-fundamental groups and one scientific-applied group is made, which I fully accept.

I. The first group of contributions reflects revisions and inventories of syntaxons.

A total of 22 main groups have been identified in the forests of *Fagus sylvatica* (C4.1), classified into 15 sub-unions; Seven main types of coastal grasslands have been identified, corresponding to the different geographical regions in Europe (C4.2); The first comprehensive revision (C4.3) of coastal communities in Europe has been carried out and 18 unions have been identified. The first standardized classification of coastal dune vegetation in Europe has been made together with an expert system containing the standard characteristics of the alliances, which can be applied to new databases. A revision of the concept for the class Ammophiletea from EuroVegChecklist is also proposed; The first phytosociological classification of oak forests in Bulgaria was made (C4.4). 19 associations and sub-associations and two communities have been identified, among which 6 associations and 3 sub-associations new to science; The first phytosociological classification of serpentine communities in Bulgaria was made (C4.5) on the basis of descriptions from their main areas of distribution in the Eastern Rhodopes. A new endemic association for science, *Onosmo pavlovae-Festucetum dalmaticae*, has been described;

Community studies on serpentinite rocks (C4.6) have been extended to the Republic of Northern Macedonia, where a new association and a plant community have been described.

II. Contributions in scientific papers under indicators D

1. Contributions of fundamental scientific value in the field of phytocology.

The forests of common chestnut (*Castanea sativa*) in Bulgaria (D7.2; D0.1) and the forests dominated by Palla's black pine (*Pinus nigra* ssp. *pallasiana*) (D7.12) are classified. The division of black pine forests into two classes - Quercetea pubescentis (at a lower altitude) and Erico-Pinetea (at a higher altitude) has been confirmed; The riparian high-grass vegetation in the Middle Danube Plain has been studied (D0.7). A new association for science, a new association for Bulgaria is described, and the union Angelicion littoralis was established for the first time for the vegetation of Bulgaria and the Balkan Peninsula; The reasons (D7.7) for the richness of the flora on a smaller scale (phytocenological descriptions) and the main factors for this in the Eastern Balkans have been studied; The type of relationship between species richness and productivity of 694 dry grass communities was studied (D7.11); A complete, consistent phytosociological classification of the European marsh vegetation of the class Phragmito Magnocaricetea (D7.14) was performed with one union and 4 associations described; A new class has been established for the vegetation cover of Bulgaria, of the weed vegetation on the rice crop - *Oryzetea sativae* (D7.15), with respectively new for the country order, union and association; The communities of Lydia jaundice (*Genista lydia*) (D7.16) have been studied and a revision and addition of the characteristics of the vulnerable natural habitat F3.1d Balkan-Anatolian submontane genistoid scrub from the European Red Habitat List has been proposed; A new for science union (D7.17) of endemic Balkan-Anatolian sub-Mediterranean shrubs Genision lydiae is described, as well as three new associations belonging to it, which are widespread in Southern Bulgaria and Northern Greece; The forest communities in the Etropole Stara Planina (D7.18) have been studied and classified according to the Brown-Blanke methodology; A comprehensive study of the macrophytic flora and vegetation of the maintained Srebarna Reserve (D8.1) was performed; The complex of wet meadows near the village of Ranislavtsi in the municipality of Kostinbrod (G0.2) has been studied, and for the first time three new associations have been published for Bulgaria; The names of 9 new associations and sub-associations (D0.3) have been validated, which are the result of the candidate's doctoral dissertation; A complete revision and the first formalized classification of floodplain forests and alder communities (D0.18) was made; The European Red List of Habitats (D0.20) has been published for the first time.

2. Scientific-fundamental contributions in the field of floristics - 3 contributions in 6 publications: D7.15, D0.8, D0.9, D0.10, D0.11, D0.13. The contributions in this group are confirmatory and original.

The following have been identified: 4 new species for the flora of Bulgaria - *Heteranthera reniformis* and *Rotala ramosior*, *Ranunculus paludosus* and *Erodium botrys*; new localities for 10 species, of which 6 with conservation significance - *Himantoglossum caprinum*, *Spiranthes spiralis*, *Ophrys apifera*, *Potentilla emili-popii*, *Echium russicum*, *Lindernia procumbens*; The distribution of *Hyacinthella leucophaea* subsp. *atchleyi* has been studied; the presence of *Circaea alpina* in the Bulgarian flora has been confirmed.

3. Scientific - fundamental contributions to the ecology of plant syntaxons - 5 original contributions in 5 publications: C4.1, C4.4; D7.7, D7.11, D7.16.

The main factors for the richness of the flora in the Eastern Balkans have been studied; The relationship between species richness and productivity of 694 dry grass communities has been established; Based on ecological and geographical groups, a multidimensional classification of basophilic beech forests has been proposed; The main ecological and floristic gradients for the oak vegetation in Bulgaria have been established; The peculiarities of the ecological and floristic structure of the communities of *Lydia jaundice* have been established.

4. Contributions of scientific and applied nature - 13 original contributions in 14 publications: D7.4, D7.5, D7.6, D7.8, D7.9, D7.13, D7.18, D8.2, D8.3, D8.4, D8.5, D0.6, D0.18, D0.20.

Inclusion of black pine forest descriptions in the European database CircumMed Pine Forest; The proposed classification of floodplain forests and alder communities provides a scientific basis for improving the classification schemes of natural habitats; Study of the birch forests in the protected area "Bachishte"; The European Red List of Natural Habitats has been published for the first time, assessing their risk of extinction; Revision of habitat F3.1d Balkan-Anatolian submontane genistoid scrub and supplement to the European Red List; Mapping and assessment of the conservation status of 10 non-mountain habitats in Ponor PZ; Publication of a manual for natural habitats with conservation significance in Strandzha Nature Park; Publication of a manual of natural habitats from Annex 1 of the Law on Biological Diversity - pastures, meadows, pastures with bushes, etc.; A critical assessment of 12 selected biological species and habitats in the Bulgarian section of the Danube River was made; The possibilities for creating forage crops from *Trifolium subterraneum* have been studied; A revision of the policies for the implementation of conservation grazing in the Nature parks and the National parks in Bulgaria is proposed in the implementation of the sub-measure "Pastoralism" under the Rural Development Program; For the first time an assessment of the supporting ecosystem services provided by the agro-ecosystems in Bulgaria has been made; For the first time an ecological approach has been proposed for the development of freshwater fish farms in the protected areas of the ecological network NATURA 2000 in Bulgaria; An assessment of the combined impacts of HPPs on ecosystems and the ecological status of rivers has been made.

5. Conclusion.

Based on the submitted competition materials and the good knowledge of the candidate's publishing activity, I believe that the teaching experience, qualities, skills and research achievements of Assoc. Prof. PhD Rosen Todorov Tsonev are sufficient grounds for his election for the "professor" academic position in the professional field. 4.3. Biological Sciences (Ecology and Ecosystem Protection - Phytoecology) in the Faculty of Biology of Sofia University "St. Kliment Ohridski". Considering that all scientometric indicators and submitted documents are in accordance with the Law for the Development of the academic staff in the Republic of Bulgaria, the Regulations for application of the Law for the development of the academic staff and with the Regulations of Sofia University "St. Kliment Ohridski" I definitely give my positive assessment of the submitted materials and recommend to the esteemed members of the scientific jury to support this choice.

January 29, 2021

Professor Assen Ivanov Assenov

