

Masaryk University	
Faculty	Faculty of Science
Procedure field	Botany
Applicant	Mgr. Jan Roleček, Ph.D.
Applicant's home unit, institution	Faculty of Science, Masaryk University
Habilitation thesis	A coexistence hotspot. From the extremely species-rich White Carpathian meadows towards the peri-Carpathian forest-steppe.
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	Prof. Dr. Erwin Bergmeier <i>Department of Vegetation and Phytodiversity Analysis, University of Göttingen, Germany</i>

Evaluation of the applicant's scholarly/artistic qualifications

Jan Roleček graduated from Palacký University Olomouc in 1999 with a degree in General Ecology and Nature Conservation, and subsequently pursued his doctoral botanical studies at Masaryk University, focusing on the diversity, ecology, history, and classification of Central and East European oak-forests. Over the years, his research expanded to include the ecology and diversity of Central and East-European steppes, particularly examining factors contributing to their species richness. He also engaged in palaeoecological studies to reconstruct the Holocene history of various Central European vegetation types, and his publications cover a broad range of topics from vegetation classification methods to palaeobotanical reconstructions. He is primarily a field botanist, so a significant part of his broadly conceived research also brings primary analytical data, mainly on phytogeographically important species, but he also deals with endangered species, their protection and management.

Roleček has collaborated with internationally recognized vegetation scientists, resulting in high-quality joint publications, and has led three major research projects funded by the Czech Science Foundation and the Grant Agency of the Czech Academy of Sciences. He has also been involved in numerous other projects focusing on paleoecology and forest ecology.

By the time of his habilitation thesis submission, Roleček had authored or co-authored 91 scientific articles in peer-reviewed journals (45 indexed in Web of Science), contributed to one proceedings article, six scholarly book chapters, and developed one software. His work had been cited 1595 times, according to the WoS database, with an H-index of 21.

Roleček has held various academic and research positions, starting as a research assistant in 2004, and progressing to senior research assistant, and later to assistant professor. Since 2021, he has been a senior researcher at the Institute of Botany's Department of Paleocology, Czech Academy of Sciences. His editorial and organizational roles include serving as the associate editor and chief editor of *Phytocoenologia - Journal of Vegetation Ecology*, and holding positions within the Institute of Botany, Czech Academy of Sciences.

Roleček is an active member of the Czech Botanical Society, the Czech Society for Ecology, and the International Association for Vegetation Science, where he serves on the European Vegetation Classification Committee. He has been actively involved in organizing major scientific conferences, such as the 17th European Vegetation Science International Workshop and the 58th Annual Symposium of the International Association for Vegetation Science.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Botany.

Evaluation of the applicant's pedagogical experience

Jan Roleček initiated his teaching career at Masaryk University during his PhD studies in 2003, starting with the practical lab course "System and Evolution of Higher Plants" (Bi20230c) which he taught until 2010. Since 2004, he has regularly taught the recommended elective lecture "Forest Ecology" (Bi8185). Additionally, he taught "Protected Areas of the Czech Republic" (Bi8880, Bi8881, Bi8882) and "Reading of the Botanical Literature" (Bi9705) from 2006 to 2022 and 2003 to 2011, respectively.

Roleček's most significant compulsory lecture, "Quaternary Environments" (Bi8300), has been co-taught with Professor Horsák since 2013. He also plays a crucial role in organizing the highly popular summer field biology courses known as "Bio-Léto" or "Special Field Practice in Botany and Zoology" (Bi8160) since 2009.

Throughout his teaching career, he has supervised 12 Bachelor's and 8 Master's theses, and he is currently supervising two Bachelor's and one Master's students. Roleček annually moderates "Floristické dožínky" since 2015, a seminar series where botanical students, Czech Botanical Society members, and amateur field botanists present significant findings of rare plant species from the last season.

As an active member of the South Moravian branch of the Czech Botanical Society, Roleček has organized and led several educational botanical lectures and field trips on specific dates, enhancing both student and public engagement. He has contributed to the popular science literature by publishing several articles in journals such as *Živa*, *Vesmír*, *Botanika*, and *Bílé/Bíle Karpaty*.

His pedagogical expertise was also highlighted during his public lecture, which received very positive feedback from all three selected evaluators.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a habilitation appointment procedure in the field of Botany.

Habilitation thesis evaluation

The habilitation thesis titled "A coexistence hotspot: From the extremely species-rich White Carpathian meadows towards the peri-Carpathian forest-steppe" (138 pages) is composed of 16 high-quality papers divided into three chapters, each addressing a major research topic: (i) Variability of steppe vegetation, (ii) Extreme species richness, and (iii) History and paleoecology of the Central European forest-steppe. In the papers, the candidate's role is clearly defined, with major contributions (as first, senior, or corresponding author) in 12 of the papers.

The thesis was reviewed by three independent, internationally recognized experts in vegetation ecology: Prof. Karel Prach, CSc., from the Department of Botany, South Bohemian University in České Budějovice; Prof. Tomáš Herben, CSc., from the Department of Botany, Charles University in Prague; and Dr. Tamás Rédei from the Institute of Ecology and Botany, Centre for Ecological Research in Vácrátót, Hungary. All three reviewers praised the scientific quality of both the thesis and the candidate highly. Prof. Prach highlighted the candidate's prominent status in Czech vegetation ecology and his international reputation, noting his wide geographical focus, the long-term temporal scale of his research based on palaeoecological studies, and his synthetic view of the vegetation studied. Prof. Herben commended the holistic approach and strategic research direction, inspired by the exceptional species richness of the region, which propelled further exploration in space and time to understand the main drivers of this richness. Dr. Rédei found the thesis thought-provoking and was impressed by the credibility and international validation of the results, from which he gained new insights into vegetation history in his own country. The candidate addressed all questions raised by the reviewers during the discussion following his public lecture, and responses were also compiled in a written appendix titled "Responses to Reviewers." All the reviewers supported awarding Dr. Jan Roleček the academic title of Associate Professor in Botany.

The habilitation committee concurs with the reviewers' positive assessments, recognizing the thesis's high scientific standard and appreciating the holistic methodology that integrates regional phytogeography with a range of palaeoecological and molecular phylogeographic methods, giving a complex explanation of the extreme species richness of forest-steppe vegetation.

Conclusion: The applicant's habilitation thesis **meets** the requirements expected of habilitation theses in the field of Botany.

Secret vote results

Voting took place: electronically

Number of board members		5
Number of votes cast		5
of which	in favour	5
	against	0

Board decision

Based on the outcome of the secret vote and following an evaluation of the applicant's scholarly or artistic qualifications, pedagogical experience and habilitation thesis, the board hereby submits a proposal to the Scientific Board of the Faculty of Science of Masaryk University to **appoint the applicant associate professor** of Botany.

In Brno on 21.05.2024

prof. RNDr. Petr Bureš, Ph.D.