DOI - 10.21570/BUL-201810-3

Ladislav Mucina: IAVS Honorary Membership

By Milan Chytrý and Robert K. Peet

Ladislav Mucina is a remarkable scientist who has tightly associated his scientific career with the International Association for Vegetation Science (IAVS). Although he uses his official first name "Ladislav" in publications, most colleagues and friends know him as "Laco" (pronunciation: latso), which is a colloquial abbreviation of "Ladislav" in his Slovak mother language.

The Early Years

Laco was born on 28 May 1956 in Piešťany, western Slovakia (then Czechoslovakia) and spent his childhood in a small village, called Dolný Lopašov, close by. He developed his interest in botany already as a high-school student under the influence of Štefan Maglocký and Terézia Krippelová, botanists at the Slovak Academy of Sciences. He graduated from Comenius University in Bratislava, and his early research interest was in community ecology and vegetation classification of the anthropogenic vegetation of Slovakia.

After graduation in 1980, he spent one year on a research visit to the Radboud (then Catholic) University of Nijmegen in the Netherlands, working with internationally leading vegetation scientists Victor Westhoff and Eddy van der Maarel. Such an opportunity was rare for scientists from Czechoslovakia and other countries of the former Soviet block because travel to the western countries was strongly restricted in the 1970–1980s. Eddy recalls that "Laco started his ecology career outside his university in Bratislava by writing to me whether he could visit my department in Nijmegen and spend some time there. We organized accommodation and a working place in the department. The accommodation soon became a room in our home in Milsbeek, where he acted as child number four. He was not much older than our children and had a great time with us. He also participated in festivities like the Dutch Santa Claus." The period in Nijmegen greatly influenced the direction of Laco's further scientific work. He became familiar with the most modern trends in vegetation science, read extensively literature not available in his home country, and established friendships with a number of international vegetation scientists.

After returning to Slovakia, he worked as a researcher at the Institute of Botany of the Slovak Academy of Sciences, continuing his studies of anthropogenic vegetation, but also developing modern approaches he had learned in the Netherlands including

Early career in Slovakia: Laco listening to explanations of Ján Michalko (on the left), the editor of the Geobotanical map of Slovakia, together with the outstanding Hungarian botanist András Terpó (photo from the archive of the Institute of Botany, Slovak Academy of Sciences).

Laco visiting his Dutch friends in 1988. This photograph with Nettie Westhoff, the wife of Victor Westhoff, and Joop Schaminée, was taken by Victor Westhoff in the garden of his house.

numerical analysis of vegetation data and looking at plant communities from a broader, international perspective, as opposed to the local descriptive approaches that were predominant in the Central European countries during that period. Together with Štefan Maglocký, he led a team of vegetation scientists who compiled the first list of vegetation units of Slovakia (1985). The team of senior researchers from the Institute was finishing the vegetation map of Slovakia at that time, and Laco significantly contributed to the preparation of the English version of the book with explanatory text for this map. Thus, he obtained experience in two fields that he significantly developed later in other countries: developing comprehensive systems of vegetation classification and broad-scale vegetation mapping. He also participated in research expeditions to study vegetation in other countries, such as Romania, Bulgaria and North Korea, usually with his friends from the Institute of Botany, Ivan Jarolímek and Milan Valachovič.

Austria and European Vegetation

In the 1980s, Czechoslovakia was a communistic country and the political regime imposed strong restrictions on freedom of scientific research and international contacts. Moreover, people with previous experience in western countries and with a number of international contacts, as Laco had, were closely watched. Laco could not tolerate such conditions any longer and decided to leave the country. He organized an international symposium "Numerical Syntaxonomy and Syndynamics" in Slovakia in May 1987, and asked the western participants to take parts of his scientific library across the Iron Curtain. He, with his wife Dagmar always on his side, and their three children (the youngest daughter 1.5 years old), soon followed the library. Obtaining permission to travel for holidays to Yugoslavia, the family crossed the border to Italy. Again, it was with the help of a scientific friend of Laco, this time Enrico Feoli, who remembers: "A good friend of mine with his boat met them in Pirano (then Yugoslavia) and brought them to Trieste. After a few days at my home, I found a suitable day to cross the Italian-Austrian border at Pramollo, a very nice mountain pass. I knew about a local festival there with many people around, so the controls were less strong. After they crossed the border following a forest trail, I collected them in Austria and left them near the closest police office".

The original plan to start their new life in the Netherlands failed, but a new opportunity appeared in Vienna, just about 50 km west of Laco's previous workplace in Bratislava, though on the better side of the Iron Curtain. After some months spent in a refugee facility in southern Burgenland, the family was awarded refugee status with the consequence that Laco could join Austrian university life. Professor Georg Grabherr at the University of Vienna was just

© J. Schaminée

Laco with Stephan Hennekens, who came to Vienna to install there the first international version of the Turboveg software for management of vegetation-plot databases (1995).

about to start a project on the synthesis of Austrian vegetation and appointed Laco as the person responsible for the scientific coordination of this project. Laco enthusiastically started this challenging work, taking a number of field trips to become familiar with the vegetation of his new country and studying the extensive national literature, including all possible kinds of local reports and other grey literature. He demonstrated several of his remarkable qualities, including the ability to learn a new flora very quickly and obtain a deep understanding of vegetation types in new areas, to master foreign languages (now German, after Russian, English and Dutch), and to lead project teams towards achieving ambitious goals. Although working on a national survey for Austria, he was developing concepts of vegetation types in an international context and in collaboration with colleagues from other Central European countries. Andraž Čarni remembers: "When working on the Austrian vegetation survey, Laco came to Ljubljana to settle some nomenclature issues of the Illyric beech forests. He studied the topic in advance and gathered all researchers dealing with beech forest vegetation in this region. They had contrasting opinions in many cases. After the presentation of

different opinions, he was able to guide the discussion to conclusions that were acceptable for everyone, thanks to his good knowledge of the topic and his capability to listen to everybody, to extract the main issues and to find a common solution. In a short time, he accomplished what seemed impossible before the meeting." The three-volume monograph *Die Pflanzengesellschaften Österreichs* (Plant Communities of Austria) was published in 1993, providing a standard for vegetation classification in Central Europe, especially by defining concepts of vegetation types and a consistent revision of their nomenclature following the rules of the International Code for Phytosociological Nomenclature.

Laco became Guest Professor and Head of the Unit of Population Biology at the University of Vienna, and in the early 1990s, after the fall of the Iron Curtain, he helped to develop vegetation science in post-communistic countries by hosting Ph.D. students and postdocs from these countries. His international group in Vienna was visited by several early-career scientists who later became active members of IAVS, including Andraž Čarni, Milan Chytrý, Monika Janišová and Lubomír Tichý. Working together with botanists from Vienna University, he also developed his interest in Mediterranean vegetation, focusing on a detailed survey of the vegetation of the Ionian Islands.

Since the death of Professor Reinhold Tüxen in 1980 and the end of his annual symposia, there had been no international platform for discussing and coordinating vegetation survey and classification efforts in Europe. To address this issue, Sandro Pignatti invited European vegetation scientists interested in these topics to meet in Rome in 1992. There they established the IAVS working group European Vegetation Survey (EVS) with Laco as a Secretary and a steering committee that included Sandro Pignatti, John Rodwell and Joop Schaminée. EVS soon became one of the most active working groups of the IAVS, holding well-attended annual meetings. Upon joining EVS Laco started to work towards a standardized classification of European vegetation. He published its first version, classification to the level of classes, in an extensive paper in Folia Geobotanica and Phytotaxonomica in 1997. Finer classification to the level of alliances, however, required cooperation of a large team of experts from EVS. With his extensive experience in the diversity of European vegetation types, Laco was a natural leader for such an effort, and he took over coordination of the compilation of standard European vegetation classification, colloquially called EuroVegChecklist. This huge effort, which required consultation of several thousand literature sources, often poorly accessible and written in various languages, took many years, partly also due to Laco's new positions and projects in Kuwait, South Africa and Australia. The project culminated in 2016 with the publication of the EuroVegChecklist as a Special Issue of *Applied Vegetation Science.* Undoubtedly it is to Laco's great merit that Europe is now the first continent with a detailed, internationally standardized vegetation classification, a resource that is critical for conservation planning, habitat monitoring and wise use of nature resources.

After Europe

In the late 1990s, Laco faced a difficult situation, having failed to find a permanent position in Austria or elsewhere in Europe. Fortunately, broad appreciation within the vegetation science community of his encyclopaedic knowledge and synthetic abilities, coupled with his adventurous and exploratory spirit, led to several exciting, shorter-term positions. He first accepted a position as a Research Fellow at the University of Pretoria, South Africa, thereby gaining first-hand experience and deep appreciation of a new and megadiverse geographic area. Soon thereafter he accepted a position as Associate Professor at

Working with Lubomír Tichý on vegetation data analyses during one of Laco's visits to Brno (2006).

Laco leading an excursion in the fynbos of South Africa during the 2008 IAVS annual meeting (photo from the archive of L. Mucina).

Kuwait University. He focused on the vegetation of this area for the next two and a half years, during which he developed the first vegetation databases for the Middle East. After this, he spent several short stays as a Research Fellow at the Universities of Camerino, Perugia and Rome 'La Sapienza', Italy, studying Mediterranean vegetation.

In 2000 new opportunities opened in South Africa and Laco was able to return to this botanically special place. From 2000 to 2001 he served as Associate Professor at Stellenbosch University, after which he moved to the University of the North in Phuthaditjaba (later becoming part of the University of the Free State), where he served as Professor and Head of Botany. In 2004 Stellenbosch enticed him back, making him Professor in Ecology. Since 2000 he has served as secretary of the National Vegetation Mapping project of the then National Botanical Institute (today South African National Biodiversity Institute), Cape Town. Together with Mike Rutherford, the NBI/SANBI leader of the project, they put together a team of about 100 mainly South African vegetation scientists, finished the map in 2005 and, in 2006, published a book that, for the first time, described the vegetation of this extremely diverse and enigmatic region in a comprehensive manner. Although he has since (in 2009) moved to Western Australia, he remains deeply involved in vegetation science in South Africa where he retains a position of Professor Extraordinary at Stellenbosch University. In 2017 he published yet another book on African vegetation, this one on South African forests.

Laco's incredible productivity in South Africa did not go unnoticed, and colleagues in Western Australia conspired to convince him to move to their country to lead an effort to map and describe the vegetation of this comparably diverse and complex biodiversity hotspot. Of course, Laco hit the ground running and in his new role as Research Professor at Curtin University in Perth he quickly organized a vegetation mapping initiative and published a book on vegetation mapping in the region. In 2013 he shifted institutions to The University Western Australia, also in Perth, which offered him a position as Professor & Iluka Chair in Vegetation Science & Biogeography. This came with significant research funding from the mining company Iluka Resources to develop a research program in restoration ecology for kwongan vegetation, one of the major directions of Laco's current research.

New Research Directions

Description and mapping of vegetation have certainly been primary foci of Laco's career, and, incredibly, he has made some of the most important contributions in these areas for three different continents. In contrast, most vegetation ecologists focus primarily on one region and even so

Laco with *Banksia menziesii* while showing the 2014 IAVS excursion participants the beauties of the kwongan.

constrained rarely produce a grand synthesis of the sort for which Laco is known. However, it would be a mistake to think of Laco's contributions as simply vegetation description and mapping. Throughout his career, he has made substantial contributions in other aspects of ecology and plant science. Relatively early in his career, he helped develop and promote the use of numerical methods for vegetation science, leading to two symposium volumes on this topic. He has contributed to design and population of numerous databases of broad value, including vegetation databases for Europe, Kuwait, South Africa and Australia. His obsession with biodiversity led naturally to multiple papers on the systematics of taxonomically challenging species groups he encountered, and more recently the application of molecular methods to better resolve such issues. Naturally, he has also delved into such topics as species diversity, community assembly, spatial pattern and ecophysiology. His vast experience with the unusual ecosystems of South Africa and southwestern Australia led to his recent substantial contributions to the quickly developing literature on ecological processes and evolution in OSLs or Old Stable Landscapes. Finally, his work in Australia is leading to new ways of approaching preservation and restoration of delicate landscapes impacted by the inevitable activities of man.

Service to IAVS and the Scientific Community

For most scientists, there is a difficult tension between professional research and service to the community, as we typically see both as important but competing for our limited time. Somehow Laco has managed to maintain his incredibly productive research career while at the same time providing enormous support to IAVS as an organization, and to the greater scientific community. Doubtless, part of the reason he has been so successful at this is

that he combines vision about what should be done with an ability to bring together impressive teams of collaborators that he effectively leads and inspires.

Laco has offered impressive editorial service to the IAVS journals. When IAVS established the *Journal of Vegetation Science* in 1990, Laco was one of the initial members of the Editorial Board. His service was so effective that in 1992 he was promoted to Associate Editor and from 1995 to 2000 he was one of the three lead Editors. During this period IAVS also established a second journal, *Applied Vegetation Science*. Laco strongly contributed to the creation of this new journal, and he served as one of the three lead Editors from its inception in 1998 through 2000. He again served as an Associate Editor from 2011 through 2014. Certainly, Laco influenced the shape and vision of these now very successful journals during their formative early years.

IAVS Governance has also benefited greatly from Laco's participation. He was first elected to the IAVS Council in 1990 and has served continuously since then, a duration surpassed by none. During this period he served on the Executive Committee as a Vice President from 1994 through 2007, and during 2007–2010 he served as Secretary and Treasurer.

For many of us, Laco's most impressive service contribution has been his organization of numerous meetings and excursions. Among the logistically most difficult of such meetings are the IAVS annual symposia and their associated excursions. In 2008 Laco organized one of our most successful IAVS meetings, which was based in Stellenbosch, South Africa. Not only was the meeting particularly well organized, but the numerous excursions across the diversity of South African ecosystems were stunning. Then, to our amazement, he organized an equally successful meeting in Western Australia for 2014 that included equally amazing field excursions to various places across the continent.

Conclusion

Laco is a leading and very influential expert in the field of vegetation ecology. His broad, encyclopaedic knowledge and wide-reaching international activities are enabling the development of both a precise, descriptive foundation and a theoretical framework for vegetation science. He collaborates broadly to advance numerous other aspects of vegetation science and related fields. For these accomplishments, he has received multiple forms of recognition. By act of the Parliament of the Republic of Austria he was awarded citizenship of that country. By the authorities of the "Bundesland Wien" he was made "Bürger von Wien" (Citizen of Vienna) – an honour of which Laco has always been very proud. In 2016 he was awarded Honorary Membership in the Hungarian Academy of Sciences and received the Holuby Medal of the Slovak Botanical Society.

Laco's dedication and contributions to IAVS and to the broader vegetation science community are truly unparalleled. IAVS is honored to recognize these contributions by naming Ladislav Mucina the 2018 Honorary Member of the International Association for Vegetation Science.

Painting by Ed Hazebroek of the fynbos of South Africa with Cape mountain zebra and Cape sugarbird commissioned by IAVS and presented to Laco as part of his Honorary Membership celebration.