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Date of Publication: November 2018
© International Association for Vegetation Science
ISSN xxxxxxxx (Online)
DOI 10.21570/BUL-201810

Avalanche Lake in the Glacier National Park.
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The IAVS Annual Symposium in 2018 took place in Bozeman, the Bear Country Montana. Many thanks to Dave W. Roberts, Peter R. Minchin, and the local team of organizers for their perfect job, hospitality and all the knowledge shared with the participants! Special thanks for the wonderful excursions and a careful protection against all possible threats of the local environment! I am sure I am not the only one grateful for the opportunity to participate on such a great Symposium. This is manifested by plenty of pictures I received from the Symposium participants. They will grace several next issues of our Bulletin.

Monika Janišová
Editor of the IAVS Bulletin
The 62nd Annual Symposium of the IAVS will be held July 14-19, 2019, in Bremen, Northwest Germany. Bremen is one of the largest cities (> 500,000 inhabitants) in the north of the country, situated at the river Weser ca 60 km from the North sea. It is a green city with short distances, the international airport is only 15 min away from the city centre.

Bremen has a diverse and outstanding scientific environment, with a strong focus on marine research. The city has three universities - the University of Bremen, the City University of Applied Sciences and the private Jacobs University - as well as famous research facilities such as the Max-Planck Institute for Marine Microbiology and, located in the sister city Bremerhaven, the Alfred-Wegener Institute for Polar and Marine Research (AWI).

The Exhibition and Conference Centre Bremen (CCB) offers a perfect setting for the meeting. The CCB is located right in the middle of the city center, directly adjacent to the main train station in the South and the green 200-hectare Bürgerpark (city park) in the north. The rooms for the presentations and meetings as well as the places for the display of the posters are all inside the same building, which is also connected to a four-star hotel. The meeting will be supported by the Bremen Convention Bureau (BTZ).

Bremen offers a wide variety of hotels at reasonable prices (July is low touristic season here), many of them being in walking distance to the CCB. Guests may choose between superior hotels, small privately run hotels, budget design hotels, hostels and youth hostels.

Scientific Program

The overarching theme of the symposium is: Vegetation Science and Biodiversity Research. How can the research conducted by the members of our association and vegetation science in general contribute to answer some of the most pressing
questions in biodiversity research and to provide data for counteracting the loss of biodiversity? Sessions may include:

- The significance of long-term vegetation data for biodiversity research
- Methodological problems associated with long-term vegetation data
- Vegetation science and floristic mapping
- Homogenization of the vegetation and biodiversity
- Climate change: evidence from vegetation data

Proposals for special sessions are welcome!

**Excursions**

The dates and destinations of the excursions are not yet finalized, but we plan for:

- A pre-symposium excursion to the Harz mountains and its surrounding. The Harz is the highest mountain chain (1,141 m a.s.l.) in Central Germany, with a strong gradient in temperature and precipitation. It offers a wide variety of bedrocks and soils supporting a large number of different habitat types, including beech (*Fagus sylvatica*) forests and montane spruce (*Picea abies*) forests, montane mesic mown meadows and oligotrophic pastures at higher altitudes, bog vegetation and also heavy metal vegetation on slag heaps in former mining areas. The area SE of the Harz in the rain shadow of the mountains is among the driest and most continental regions of Germany, with a rich flora and some of the best preserved dry grasslands of the country.

Salt marsh on the Wadden Sea island of Spiekeroog (left).

Dunes on the Wadden Sea island of Spiekeroog (right).

Bremen Roland, near the Town Hall, together forming a UNESCO world heritage site.
• A post-symposium excursion to the Wadden Sea islands of the North Sea being part of the coastal National Park. The islands offer the opportunity to see saline habitats with a gradient from pioneer vegetation on tidal flats on sandy to muddy substrates to perennial salt marshes between the southern fringe of the islands and the mainland, as well as the dune series at the northern, exposed side of the islands with pioneer vegetation in fertile strandlines, white and grey dunes farther away from the shore. Dune slacks are small in size, but are floristic hotspots of the islands. The Wadden Sea islands are also famous for their rich bird life, especially during migration periods.

• For the short mid-symposium excursions we will offer various field trips to areas and habitat types typical for the lowlands in northern Germany, including the Lüneburger Heide nature reserve (a traditional cultural landscape with Calluna heathland rich in Juniperus, acidic Nardus grasslands and a rich cultural heritage), the forest reserve Hasbruch (famous for its large number of very old Quercus and Carpinus trees being remnants of former woodland management), ombrotrophic bogs (both near-natural and restoration sites), wet grasslands as important NATURA 2000 sites, Lake Dümmer (an eutrophic lowland lake with one of the largest wetland restoration sites in Germany) and the harbour of Bremen with many interesting ruderal and neophyte species.

• Day trips for accompanying persons, for example to the artist villages Worpswede and Fischerhude, a boat trip on the river Weser and an excursion to the Rhododendronpark with the second largest collection of Rhododendron species in the world, including the Botanical garden and the botanika, the green discovery centre.

Based on the experiences and feedback from former symposia we like to schedule workshops and working group meetings on the days preceding and following the main symposium. These will take place in rooms offered by the University of Bremen. Suggestions for topics are welcome!

Getting There

Bremen has an international airport located only 6 km from Bremen’s city center and the CCB. There are several direct connections to major cities such as Frankfurt, Munich, Amsterdam, Paris and London. Other international airports (Hamburg, Hannover) are not far from Bremen and can easily be reached by train.

Germany has a liberal policy for short-term visitors. Thus, many nationalities don’t need a visa at all, and all other nationalities will get visas without problems to attend the conference. The organizers will care for the rapid provision of invitation letters for all participants that require a visa for entering Germany.

The first circular with more detailed information will be sent to the IAVS membership and other interested people in November 2018.

Welcome to Bremen!
Veronica maritima (Pseudolysimachion longifolium) and Thalictrum flavum in wet meadows near Bremen.

Wet meadow with Senecio aquaticus near Bremen.
Meeting Place

The 27th Congress of the European Vegetation Survey was held on May 23–26, 2018. This year researchers interested in European vegetation met in Poland. The meeting took place in Wrocław, which is one of the oldest cities in Poland and the largest city in the south-western part of the country. It is also a significant center for students. Wrocław is located in the Odra valley. In the historic parts of the city one can admire the beauty of the river, and on the outskirts there are remnants of natural riparian vegetation.

The Congress took place at the University of Wrocław which dates back to 1702 when the Leopoldine Academy was established. The Botanical Garden of the University of Wrocław hosted the meeting.

Participants and Presentations

The congress was attended by 180 participants from 28 countries:

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The IAVS Global Sponsorship Committee provided financial support for 13 participants from four countries.

The main topic for the 27th EVS Congress was: *Vegetation survey 90 years after the publication of Braun-Blanquet’s textbook – new challenges and concepts*. Our programme included three plenary talks which started each day of the conference. The opening ceremony was followed by a lecture from John Rodwell titled *90 years on, how does phytosociology inform habitat conservation and assessment?* The second day began with a lecture by Zoltán Botta-Dukát *New challenges in the vegetation classification in the recent data-rich era of phytosociology*, and the third day with the presentation by Idoia Biurrun *Plant invasions in Europe: general overview across natural and semi-natural habitats*.

A total of 131 presentations were delivered comprising 51 oral presentations and 80 posters. Oral presentations were presented in eleven sessions, and posters in two sessions. They were presented under the following topics:

- Extending scale in spatial, temporal and environmental dimensions
- Plant community responses to changes in management
- Vegetation and alien plant invasions
- Assessment and conservation of European habitats
- Classification and database management

As in previous years, the conference served to integrate our community and provided many opportunities to exchange ideas and generate new ones.

**Social Events**

One of the most important social events of the conference was the preparation of a letter to Professor Sandro Pignatti. Milan Chytrý came up with an idea to write a letter with greetings from the Congress participants. This idea was enthusiastically supported! It provided a great opportunity to recall the long tradition of the IAVS and EVS meetings and to appreciate the importance of underpinning research to all current achievements in vegetation science.

The Congress offered good opportunities to get to know each other, meet old friends and spend a nice time together. The conference organizers offered two guided sightseeing tours in Wrocław Old Town and in the Botanical Garden, which were of great interest to the participants. The Congress social dinner took place on the ship and the cruise was indubitably an attractive part of the meeting. It was also a great occasion to show off dancing skills, and many succeeded in doing this!

**Excursions**

The conference organizers proposed three one-day excursions promoting the most interesting sites in the region.

Excursion 1 took place in the Stołowe Mountains National Park and peat bog near Zieleniec. It was guided by Zygmunt Kącki, Ewa Szczęśniak and Grzegorz Swacha. In the national park, participants of the Congress visited Errant Rocks. This is a site with amazing rock labyrinths resulting from sandstone weathering. It was really fun to squeeze through narrow rock corridors! There, we also observed relic stands of *Pinus x rhoetica*. The second destination in the national park were savannah-like grasslands near the abandoned village Łężyce, where we explored a mountain grassland of the alliance *Polygono-
Trisetion and tall-forb vegetation with Veratrum lobelianum of the class Betulo-Adenostyletea. We were lucky to see Trollius europaeus in flower and other rare species such as Arnica montana, although it was not in flower. The final destination was peat bog near Zieleniec with the glacial relics Betula nana and Carex pauciflora.

Excursion 2 allowed the participants of the Congress to visit the Kaczawskie Mountains and Kaczawskie Foothills region. Kamila Reczyńska and Krzysztof Świerkosz were our guides. Our first stop was the mountain of Ostrzyca – a basalt cone of Cenozoic origin, where the upper elevations are protected as a nature reserve. Participants observed numerous geomorphological features such as summit and mid-slope crags and cliffs, extensive scree covers, and boulders as well as a range of plant communities. Amongst the latter, the most important were Acereti-Tilietum phytocoenoses in two forms: the typical, shaded phytocoenoses covering boulders of the north-facing slope and the thermophilous form associated with basalt scree on south-west-facing slopes. The second site visited was the large complex of well-preserved Molinia meadows near the Muchów village, where we saw abundant population of Iris sibirica and other interesting species. The third site was the Wąwóz Lipa nature reserve, which protects a hill cut by deep and rocky gorge. There we observed traces of Paleozoic volcanism in the form of lava pillows within greenstone rocks and plant communities that are characteristic of rocky gorges in this region. These included riparian forests of the Stellario-Alnetum and oak-hornbeam forests of the Galio sylvatici-Carpinetum, which covered the lowest terraces along the streams and parts of slopes, respectively. The largest area in the reserve was occupied by ravine forests of the Acereti-Tilietum and formerly coppiced, thermophilous oak forests of the Sorbo torminalis-Quercetum that supported orchid populations. Rocky outcrops communities were also an important component of vegetation that were commonly scattered within the forests.

Excursion 3 in the Odra river valley was guided by Magdalena Szymura, Tomasz Szymura and Renata Łojko. The trip started in the nature reserve “Odrzysko” in the Odra river valley, where a 10 m scarp separates the lower and upper alluvial terraces of the Odra river. We walked along an oxbow with aquatic vegetation and remnants of soft- and hardwood riparian forests. After breaking through a sea of nettles (Urtica dioica), we reached a sandy bank of the Odra river. Lunch was served in the historic Lubiąż abbey, which was established in the Odra river valley in the 13th century. Afterwards, we visited the baroque rooms of the abbey. During the second part of the trip, we visited grasslands. En route we made a short stop to take photos in a beautiful patch of common poppy (Papaver rhoeas) growing on cereal fields. After the stop, we walked through grasslands with fluctuating water levels and lowland hay meadows. It was pleasure to see blooming orchids of several different species.

The excursions took all day long, but still everyone hungered for more!
Aceri-Tilietum phytocoenoses occurring on south-west-facing slopes of Ostrzyca Mt, Kaczawskie Foothills (left).

Time for discussion, Wąwóz Lipa, Kaczawskie Foothills (right).

The bank of oxbow with reed beds and aquatic vegetation (left).

The baroque rooms of the historical Lubiąż abbey were also interesting (right).
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 Milisbeek, 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...
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 communist 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 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...
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 Phuthaditjhaba (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 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.
We would like to show the Readers our favourite memories from the IAVS Bozeman conference and excursions. The itinerary of the excursions was full with programs through Montana, Idaho and Wyoming, so here we share only some of the most memorable moments.

The pre-symposium excursion ‘A’ headed to the Glacier National Park and the Continental Divide, led by Peter Minchin. We visited a wide range of habitats, such as western larch and ponderosa pine forests, ancient western red cedar groves, subalpine grasslands, and prairies. We encountered scenic landscapes such as the Glacier National Park, the Avalanche lake, the Ross Cedar Creek and the Kootenai Waterfalls.

Here are our favourite memories.

The spectacular yellow-flowered glacier lily (*Erythronium grandiflorum*) was in the peak of flowering when we visited the subalpine region of the Glacier National Park (right).

Ponderosa pine (*Pinus ponderosa*). Its bark has a special scent, similar to vanilla or bourbon whiskey (left).
The American Robin (*Turdus migratorius*) is a widespread nesting species of the region.

Ground Squirrels (*Urocitellus columbianus*) were running everywhere around the summit. They were not shy at all and very much interested in the food of the tourists.
Snow field near the Hidden Lake in the Glacier National Park.

Hoary Marmots (*Marmota caligata*) live near the treeline.
We were so lucky to observe a grizzly bear near our trail. Even though it looks giant, the rangers told us that it was a two-year-old youngster.

Scenic view from our trail in the Glacier National Park.
The Avalanche Lake receives water from a glacier. Its water is crystal clear, but very cold.

The Kootenai waterfalls are among the largest free-flowing waterfalls in the United States. It is considered as a sacred site by the Kootenai indian tribe.
Those who were brave enough had wonderful views from the swinging bridge over the Kootenai River.

Ross Cedar Creek is a scenic forest of western red cedar (*Thuja plicata*). Several giant trees are estimated to be older than 1000 years.
Western red cedar (*Thuja plicata*).  
Ikebana – nice synusium on a cedar stump.
Besides the lectures, there were a lot of opportunities for botanising and visiting interesting locations in and near Bozeman during the conference. Definitely, the Museum of the Rockies was one of our favourite. There were ten options for mid-symposium excursions, so it was very difficult to choose from so many interesting routes. Finally we went to the northern range, just outside the Yellowstone National Park. Dr. Bruce Maxwell, Agro-Ecologist, and Director of the Institute on Ecosystems at MSU, guided us by favour, for which we are really grateful! The tour was very interesting and focused on grasslands on various altitudes with different grazing regimes. We were impressed both by the similarities and differences between the North American and Eurasian dry grasslands regarding their species composition and their role in the whole ecosystem. We also realized that nature conservation problems are quite the same in the grassland habitats of the World. Encroachment of invasive species is an important issue for American nature conservation, however it was really strange to see our common European species (such as *Bromus inermis* and *Poa angustifolia*) as problem species in America.

![Skeleton of a *Tyrannosaurus rex* in the Museum of the Rockies. Sixty percent of the skeleton consists of original bones (see the darker colours).](image-url)
Skull of a *Pacycephalosaurus* in the Museum of the Rockies.

Scenic view in the northern range of Yellowstone National Park (mid-symposium excursion).
On the dry and nutrient-poor soils of the northern range, the crested wheatgrass (*Agropyron cristatum*) is the dominant grass in the pastures.

We met several Pronghorn Antelopes (*Antilocapra americana*).
The elk (*Cervus canadensis*) is the most widespread grazer in the area.

Some elk are not shy at all. They often rest near residential areas, and we can observe quite big flocks.
Scenic view from the dry, low-productivity pastures in the northern range of Yellowstone.

The beautiful Yellowstone river is the largest undammed river in the United States.
Winter pasture of elks.

Western Tanager (*Piranga ludoviciana*).
The post-symposium excursion was organised by Dave Roberts, and headed to the Beartooth and Yellowstone National Parks. We got a comprehensive overview on the vegetation types of the region, and the role of disturbance in landscape-scale vegetation dynamics. It was very impressive to see the huge, endless forests, where still nowadays fire and grazing are important drivers of vegetation dynamics. We also visited some of the most iconic landmarks of the region, such as the glaciers, hot springs and the Grand Canyon of Yellowstone.

On the way to the Beartooth Mountains, the lower-elevated hills are covered by sagebrush grasslands, dominated by *Artemisia tridentata*. 
Lower-elevated forests are dominated by the Douglas fir (*Pseudotsuga menziesii*).

Spider on the inflorescence of Alpine aster (*Aster alpinus*).
Pine-drop (*Pteropus andromeda*).
Umbellate wintergreen (*Chimaphila umbellata*).
Yellow columbine (Aquilegia flavescens).

The famous Beartooth peak.
Whitish gentian (*Gentiana algida*) was in total blooming on the alpine region of the Beartooth Plateau.

*Lewisia* sp. on the Beartooth Plateau.
Open groves of limber pine (*Pinus flexilis*) in the Beartooth Plateau.

The frequent freezing and melting of the soil creates these polygons of large rock outcrops.
Pikas (*Ochotona princeps*) were running on the rocks and searched for fresh grasses and forbs.

Snow field on the Beartooth Plateau.
Gray Jay (*Perisoreus canadensis*).

Taggart Lake, with the Grand Tetons in the background.
The famous Teton peaks.

The scouts of Jackson Hole, Wyoming collect elk antlers in the winter in the National Elk Refuge area, where thousands of elks overwinter each year.
They built impressive arches on the four corners of the George Washington Memorial Park in Jackson Hole.

Western scene in the Town Square of Jackson Hole, Wyoming.
After entering to the Yellowstone National Park, we had a nice walk around Trout Lake.

Vegetation on the shore of Trout Lake.
Logdepole pine (*Pinus contorta*) can recover quickly after fire, both via seeding and resprouting. The picture shows a stand burnt nine years ago.

Open herb layer in a lodgepole pine stand which burnt two years ago.
Standing dead burnt trunk of a lodgepole pine.
The American Bison (*Bison bison*) was in the range of extinction at the time of the foundation of Yellowstone National Park. Today, there are approximately 5000 bison in the National Park, so the population recovered successfully.

A lonely bison bull in the *Artemisia tridentata* sagebrush grassland.
Our accommodation was just next to the beautiful Yellowstone Lake, so we could catch the first sunbeams in this wonderful place.

A giant Elk grazing near the Yellowstone Lake Logde.
Chipmunks (*Tamius minimus*) were almost everywhere.

We met a coyote (*Canis latrans*) on our way to the Old Faithful.
The most famous geyser is Old Faithful, which erupts faithfully in every 88 minutes.
The wonderful Zaphyre Pool hot spring.

We had to be patient for waiting the small eruptions of the Mustard Spring.
Magnificent colours of the Morning Glory Pool.

Grotto Fountain.
South Scalloped Springs.

The spectacular Grand Canyon of Yellowstone.
The canyon is approximately 39 km long, 240-370 m deep and 400-1200 m wide.
The IAVS Vegetation Classification Working Group (VCWG), founded in 2014, has 190 members from all continents (email scott.franklin@unco.edu if you wish to join). The VCWG is dealing with vegetation classification at any spatial and organizational scale, mainly with respect to methodology, terminology, and international exchange (Franklin et al. 2016). During the first three-year term of duty the Steering Committee focused on plot-based vegetation classification approaches with the aim to produce an up-to-date overview of the major methodological solutions that are available globally for this complex and important task. The last such overview is the classic book edited by Whittaker (1973), which presented nine major approaches of that time in the famous series *Handbook of vegetation science*. Since then many things have changed, most notably numerical methods have seen a dramatic development, and we now have huge vegetation-plot databases with millions of vegetation plots at our disposal (Dengler et al. 2011; Chytrý et al. 2016).

The members of the outgoing Steering Committee of the VCWG together with Dave Roberts thus made an attempt to gather the most important current approaches in one place. They succeeded in getting 12 contributions from all continents except South America, three of which are reviews of a wider range of different approaches used in a certain region or under the same “label”.

Thanks to a good collaboration with *Phytocoenologia*, the leading journal in vegetation classification (Dengler et al. 2017), collaborating with IAVS, in summer 2018 a 170-page Special Issue was published (Box 1, Fig. 1). Now, 45 years after Whittaker (1973), an overview is available in which the articles have a relatively similar structure and use the consistent terminology proposed by De Cáceres et al. (2015), which paper actually was the starting point of the whole working group. It is evident that vegetation classification is vivid around the world, with many big project currently running also in regions such as North America, South Africa, China, Australia and New Zealand which were hardly active in this field when Whittaker (1973) compiled his book. The individual articles are complemented by a Review and Synthesis written by the editors (De Cáceres et al. 2018), where the presented approaches are compared with two big synoptic tables and their commonalities and differences highlighted.

We hope that this Special Issue will become a major source of reference and stimulate international collaboration towards unification of the approaches.

Articles included in the Special Issue published in *Phytocoenologia* 48(2) [Open access articles are marked with the download link to their pdf, while for the other articles the e-mail address of the corresponding author is provided to allow easy access to the pdf.]:


Rodwell, J.S. 2018. The UK National Vegetation Classification. *Phytocoenologia* 48: 133–140. [johnrodwell@tiscali.co.uk]


Cover of the Special Issue that represents the diversity of vegetation types in those regions from which methodological approaches are presented.
Grasslands in the Palaearctic biogeographical realm are exceptionally species rich; they are a treasure of nature. However, their values are often neglected in man’s thinking, either from the perspective of management of natural resources or policy measures. The aim of the 16th annual Eurasian Grassland Conference is to highlight the ecosystem values Palaearctic grasslands deliver to the world, and to provide a forum for the exchange of ideas on how we effectively ensure their sustainability. In addition, it aims to promote networking and collaboration between those interested in all aspects of semi-natural and natural grassland research and conservation. The conference is intended to bring together the latest research and link this to practical management and policy, thereby contributing to the sustainability of semi-natural grasslands and their animal and plant resources.

The conference will take place from 29 May to 5 June, 2019, jointly hosted by the universities of Graz, the capital city of the province of Styria (Austria), and Maribor, the second largest city of Slovenia. The academic part of the conference will be held at the Institute of Biology, Department of Plant Sciences, University of Graz, in the heart of Austrian Styria.

Two excursions are planned. The mid-conference excursion (31 May) will focus on species rich Arrhenatherion grasslands in a “hay-milk” region in the western part of Styria (Austria). Moreover, a three-day post-conference excursion will take place in Slovenia (2–5 June). On the first day, we will visit the Goričko Landscape Park with dry grasslands on acid non-carbonate substrate (NE Slovenia). During the second day, we will visit the wooded (dry) grasslands (the remains of an ancient cultural landscape) along the Drava River, the low tertiary hilly Haloze region, which has the highest density of orchid-rich Mesobromion meadows. The third day will take us to the Slovenian Dinaric (sub-Mediterranean Illyrian) dry meadows (alliance Scorzoneron villosae) and karst pastures (alliance Saturejion subspicatae).

As in previous years, there will be:
- Technical workshops, dedicated to actions on grassland management and networking
- IAVS travel grants, available for those who fulfil the grant allocation criteria
- Young Investigator Prizes, for young scientists for the best oral or poster presentations to the conference
- Conference publications, in the form of Special Features (SFs) with selected contributions from the conference and published in international, peer-reviewed journals, guest-edited by EDGG members

Preliminary Programme

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>29th May</td>
<td>Welcome in Graz, registration 16:00 – 20:00</td>
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<tr>
<td>30th May</td>
<td>Talks and posters</td>
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<tr>
<td>31st May</td>
<td>Mid-conference excursion (Styria, Austria), optional technical workshop, in the evening: grassland party</td>
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<tr>
<td>1st June</td>
<td>Talks and posters; EDGG General Assembly</td>
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<tr>
<td>2nd June-5th June</td>
<td>Post-conference excursion (Slovenia), optional, max. 40 participants</td>
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Important Dates

- Early Bird registration deadline – 28 February 2019
- Late registration deadline – 29 March 2019
- Abstract submission deadline – 29 March 2019
Registration

The conference web page with the possibility to register and upload your abstracts will be launched in January 2019 (all EDGG members will be informed by e-mail when the website is available). Further information (fees, detailed schedule) will be announced in the Second Circular (Palaeartic Grasslands 39, December 2018).

Organizers

The Eurasian Dry Grassland Group (EDGG) (www.edgg.org)
The University of Graz (https://www.uni-graz.at/)
The University of Maribor (https://www.um.si/en/Pages/default.aspx)

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Sub-Mediterranean Illyrian Grasslands, association Danthonio-Scorzoneretum.

Orchids-rich Mesobromion meadows in Haloze region, NE Slovenia

Hayfield near Neumarkt/Styria, Austria
The participants in the post-symposium excursion examine alpine vegetation near Beartooth Pass in the Custer-Gallatin National Forest, southern Montana, northeast of Yellowstone National Park.