IAVS

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Editorial

by Javier Loidi

Chair of the IAVS Meetings Committee

Dear IAVS members!

During 2020, the pandemic strongly influenced our personal and professional lives and also profoundly affected the activities of IAVS. The annual symposium that was scheduled to take place in Vladivostok in July had to be cancelled, together with the associated field trips. In 2021, with the initial expectations of a prompt resolution of the situation, our plan was to have the annual symposium in Madrid and the associated excursions across Spain in June and July, but given the actual evolution of the pandemic, we decided to postpone all these events until 2022. As a result, there will be a two-year gap without any personal contact among us in the form of a meeting, where we can present our work, learn from others, and establish new connections. This is far too long, because promoting such activities is one of the main duties of our association. Historically the annual symposium has been one of the association's most successful events. It has contributed to creating a network of international relationships in which most of us feel very comfortable and it has been very beneficial for us, both scientifically and professionally. To offset the effect of this gap and keep the tradition of a yearly meeting alive, we (the IAVS Governing Board) have decided to celebrate an online meeting in September of 2021.

This presents a number of challenges and opportunities. It will be the first time we have dared to organize a scientific symposium in which our participation will be entirely virtual, and that creates some uncertainty because we have no experience in doing so. However, a number of online meetings have already been celebrated in other scientific fields, with satisfactory results in terms of participation, quality of contributions, and general acceptance. Thus, we are optimistic. Colleagues will be invited to take part in a meeting without having to travel to a distant city. We will be able to participate from our offices or dwellings in a much more comfortable and inexpensive manner. The lower costs should make it more likely that a much larger group of colleagues will be able to participate. This aligns with the association's goal of extending participation to colleagues from a wide range of countries and professional situations. As always, IAVS will provide "travel" grants, this time covering the registration fee for students and participants from low-income countries.

We are at a major turning point. Things may never be the way they were before the pandemic. It is likely that IAVS will be able to resume the organization of face-to-face meetings and excursions, as we have done in the past, but it is also likely that we will organize online activities, such as virtual meetings, webinars, online courses, etc., and that these will be of increasing importance in the future. Such meetings may provide a dual benefit of increasing our interactions without increasing our carbon footprint. We are going to take the initial step to enter this new reality and we need support from all of you in order to be successful. We look forward to your enthusiastic participation and hope to meet you at the IAVS online annual symposium in 2021.

I wish you all a happy and scientifically exciting 2021!

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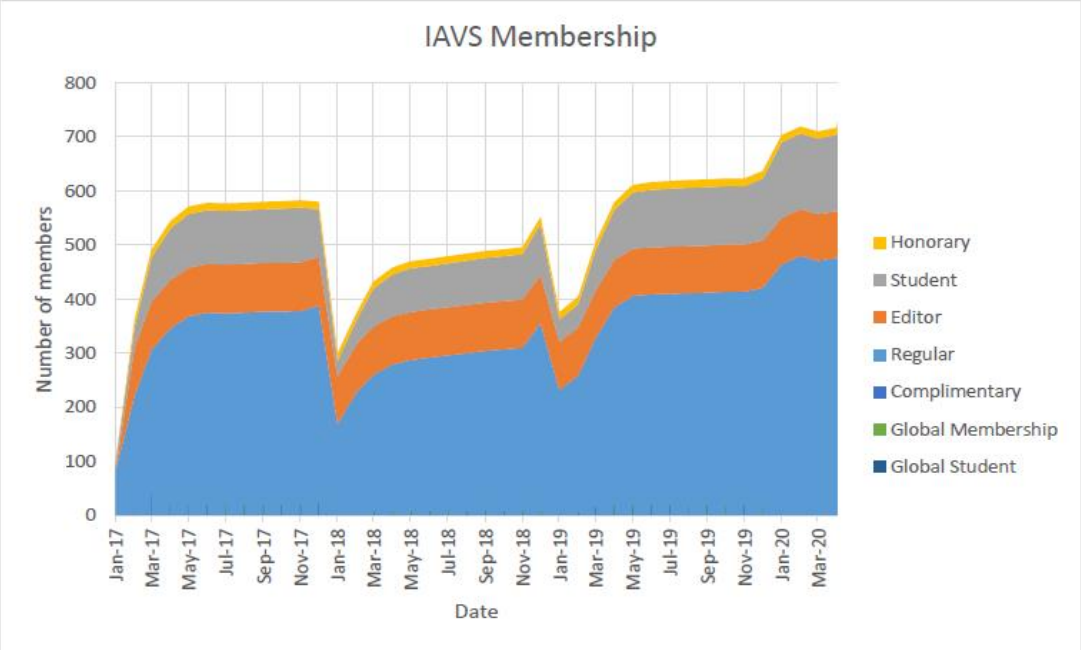
IAVS Annual Reports (July 2019–June 2020)

Membership Report

Data compiled by Caroline Gutierrez (MCI)

Sorted and visualized by David Zelený



Overall trend of the membership number (January 2017–May 2020), broken into categories.

IAVS Membership Committee Report

by Jürgen Dengler, Committee Chair

In February 2020, Jürgen Dengler was asked by the previous Governing Board to establish a new Membership Committee, which he did. The following persons were members of this short-term Committee (2019/02–2019/07) (in brackets country of residence and special function):

- Jürgen Dengler (Chair, CH, connection to EDGG)
- Bianca Andrade (currently US, connection to Latin America)
- Riccardo Guarino (IT)
- Frank Jonghong Li (CN, connection to China)
- Javier Loidi (ES, connection to GB)

Despite the fact that this committee was in force only for five months, it was quite active. It developed a strategy to make IAVS more attractive to (potential) members and to increase membership. To this end it made several proposals to the IAVS GB, prepared drafts of advertising materials (flyer, poster) and evaluated the membership list (for details, see below). The most important proposal made to the IAVS GB was to find ways to avoid that every year half of the members drop out in the renewal cycle. Apart from a generally more logic and transparent structure of the membership fees, we proposed to introduce 3-yr membership with a slight discount compared to three 1-yr memberships (to encourage members to stay in the association and to reduce administrative workload both for the IAVS Office and for members). This proposal was largely accepted by the GB and put into force in the renewal cycle 2019/2020. As IAVS President Susan Wiser recently reported, probably largely in consequence of this measure, IAVS in summer 2020 has reached an all-time high with more than 700 members (despite all IAVS conferences have been cancelled in 2020).

As for all Committees, the terms of duty of the old Membership Committee ended with the IAVS Symposium in Bremen. End of September 2019, the IAVS GB asked again Jürgen Dengler to establish a Membership Committee for the period 2019–2023. The intention was to include some more members to ensure good connection to the IAVS Global Sponsorship Committee, to the IAVS Website and Social Media Committee, to the IAVS Young Scientists Working Group and to IAVS members from Africa. Since all these three subgroups were also reorganising themselves, it took several months until persons were nominated and agreed to serve in the IAVS Membership Committee 2019–2023. Finally, the following eight persons agreed to serve:

- Jürgen Dengler (Chair, CH, connection to EDGG)
- Bianca Andrade (currently US, connection to Latin America)
- Riccardo Guarino (IT)
- Reginald Tang Guuroh (GH, connection to YS and to Africa)
- Gerald Jurasinski (DE, connection to Website and Social Media Committee)
- Frank Jonghong Li (CN, connection to China)
- Javier Loidi (ES, connection to GB)
- Alireza Naqinezhad (IR, connection to Global Sponsorship Committee)

In December 2019, finally the Membership Committee 1019–2023 was complete and appointed. However, at that time IAVS was amidst the transition from one service provider to another and thus no actions of the Committee were possible. And in spring, when the transfer was more or less completed, the majority of Committee members were busy/blocked due to the Corona pandemic and thus not responsive. For these reasons, the Committee, apart from various mail exchanges in the Committee and with the GB, was largely inactive in the period December 2019–June 2020. Since now the development of the pandemic allows +/- normal work again in many countries, the Committee intends to resume its work in July 2020. In particular, this means updating the strategy plan of 2019, getting it approved by GB and start with the implementation of the medium-term activities:

Strategy plan

Items and text are from spring 2019, but prioritization has been adjusted in summer 2020.

Steps that have largely been implemented in 2019

(i) Organisational issues

- Put our Committee with names and task on the IAVS Website
- Should we have a mail address, e.g. membership@iavs.org?
- Should we have a Dropbox for Committee Documents?
- We need to get direct access to the membership database!

(ii) Checking IAVS website and joining/renewal function

- Is everything functional?
- Is everything up-to date and provided in the right place?
- Which urgent changes are needed?

(iii) Ad-hoc improvements of the joining/renewal function + fee regulations

- Direct link to GSC waivers
- Joining of working group and sections needs to be communicated to their membership administrators
- Problems with payment options?
- Option for payment for several years (with discount)
- Option to recognise our planned promotion actions (e.g. promo code + discount)
- Consider free membership also for Phyto editors and EdBoard

(iv) Report in the next IAVS Bulletin

- Present the new Committee and its aims
- Present the current status of membership: low number, world map showing the densities
- Ask for gaining new members (perhaps provide a discount or present for those who gain new members; we would have to implement this functionality on the renewal/join website).
- Ask for other suggestions to our work

Steps that are far developed and only need completion

(v) Preparation of attractive information material on why one should joint IAVS

- Collection of all items of benefits and of how low membership fees are (or free in most cases)
- Update of respective website
- Preparation of a flyer, for print and as pdf

Steps proposed for the medium-term (i.e. 2020)

(vi) Approach all the lost members IAVS symposium attendees of the past five years

- Invite them to renew with the flyer and the call for the symposium in Bremen
- Possibly offer them a discount
- Ask them why they did not renew (to find out about technical problems, lack of communication, lack of attractiveness of IAVS)

(vii) Approach all Working Group members who are not in IAVS

- Mailing to their members
- Provide our flyer to their conferences

(viii) Approach vegetation ecologists/geobotanists in underrepresented regions

- Such as China, India, Africa, Latin America, (further priority regions with many vegetation ecologists but few members, see evaluation in membership table)
- Via national societies
- Via active IAVS multiplicators
- Or just contact all current members in one country/region
- Provide our flyer to their conferences

(ix) Questionnaire to members

- Find out what they expect from IAVS, which additional services they would appreciate, etc.

(x) Full revision of membership database and membership functionality (join & renew)

- Effective renewal
- Multiple-year membership with discount
- Option to make donations
- Full integration with Working Group, Section and Symposia databases

Steps proposed for the long term (i.e. 2021–2023)

(xi) Developing new offers for our members

- Widening the scope of our symposia to neighbouring disciplines
- Offering special products for members (T-shirts, special publications,…)
- Provide membership network
- Anything else that comes out of our questionnaire

(xii) Improving the ways of communication with members and other vegetation ecologists

- Much better website
- Social media
- Better integration of Working Group & Section activities
- Develop more regional sections, particularly for Latin America, Africa and East Asia, possibly involving regional conferences.

Report of the IAVS Publications Committee

by Peter R. Minchin, Vice President for Publications (Publications Officer)

1. Publications Committee

The IAVS Publications Committee currently consists of Peter Minchin, Chair (US), Bob Peet (US), Hans Henrik Bruun (DK), Jessica Gurevitch (US), Tomáš Herben (CZ), Michael Manthey (DE), Norman Mason (NZ), Laco Mucina (AU), and Martin Zobel (EE).

2. State of the Journal of Vegetation Science and Applied Vegetation Science

Both the *Journal of Vegetation Science* (JVS) and *Applied Vegetation Science* (AVS) continue to do well. Extensive information on circulation and sales, readership, article downloads, content management, impact metrics, and several other topics is given in the 2019 Publisher's Report.

Availability

The total number of institutions that purchased a license for JVS and AVS increased substantially, from 6,316 in 2018 to 7,340 in 2019 (an increase of 16%). As

in 2018, the majority of institutions purchased a Wiley license, which gives access to a range of Wiley titles, rather than a traditional subscription. There was also an increase in the number of institutions accessing our journals through an EBSCO subscription, from 1,678 in 2018 to 1,729 in 2019 (an increase of 3%).

In 2019, Wiley's philanthropic initiatives gave low-cost or free access to current content in JVS and AVS to 6,193 institutions in developing countries. Formal national consortia were set up in countries that had previously had low cost access under the International Network for the Availability of Scientific Publications (INASP) initiative, including Ghana, Kenya, Zimbabwe, and Uganda. We are happy that Wiley's generosity allows so many of our colleagues and their students in the developing world have access to our journals.

Institutional and individual print subscriptions continued to decline in 2019 and the average print run currently stands at approximately 99 copies per issue for JVS and 111 copies per issue for AVS. As explained below, IAVS has agreed with Wiley to discontinue print as an option for both journals. Starting in 2021, both JVS and AVS will be published on-line only.

Authorship & Readership

Our journals continue to be highly international in both authorship and readership. Of the 113 articles published in JVS in 2019, the countries with the highest numbers of corresponding authors were China (15), US (14), Germany (12), Brazil (8), Canada (8), and Czech Republic (7). Of the 52 AVS articles published in 2019, the countries, with the highest numbers of corresponding authors were Germany (8), US (6), Brazil (5), Italy (4), and Australia (4).

The international nature of our readership is shown by the statistics for article downloads and online traffic by country. The top ten countries for online downloads of JVS in 2019 were US, China, Germany, Brazil, UK, Canada, Australia, France, Spain, and Czech Republic. For AVS, the top ten countries for downloads in 2019 were US, China, Germany, Brazil, UK, Australia, Canada, France, Spain, and Italy. In 2019, the number of article downloads from Wiley Online Library, EBSCO, and other third-party databases (e.g. JSTOR), increased markedly from 2018 levels for both JVS (36% increase to c. 230,000) and AVS (40% increase to c. 90,000). These increases are in line with the average increase in article downloads from 2018 to 2019 across all Wiley journals in the Ecology subject area (39.7%).

Revenue

Our share of the profits from both journals rose substantially in 2019. For JVS, the total net revenue received by IAVS from Wiley in 2019 was £137,428, which is a 12% increase from 2018 (£122,248). Net revenue from AVS in 2019 was £34,624, which is a 48% increase over 2018 (£23,365). Revenue received from our journals continues to be the major source of income for IAVS.

Impact Factors

The 2-year IF for JVS in 2019 was 2.698, an 8.4% decrease from 2018 (2.944). The 2-year IF for AVS in 2019 was 2.574, a 27.9% decrease from 2018 (3.568). The high IF for AVS in 2018 was influenced by a large number of citations of the Mucina *et al.* paper on the vegetation of Europe and a decline in 2019 was expected. The 5-year IF for both journals also declined in 2019 but by a smaller amount. For JVS the 2019 5-year IF was 3.177 (a decline of 6.3%) and for AVS to the 2019 was 2.903 (a decline of 3.9%). On the other hand, the CiteScore (an alternative journal metric published by Scopus) for both JVS and AVS increased in 2019. For JVS, CiteScore in 2019 was 5.3 (an increase of 3.9%), while for AVS, CiteScore in 2019 was 6.0 (an increase of 22.4%).

Production time

In 2019, average days from receipt of a final manuscript to print publication dropped by 12 days for JVS and decreased by 35 days for AVS, compared to 2018 values. With the move in March 2019 of the Editorial Office for JVS and AVS from the outsourced company Editorial Office Ltd. to in-house production in Wiley, it was anticipated that increased efficiencies would lead to drops in handling and production time for our journals and this seems to be the case. Under the new arrangements, Wiley committed to maintain the average number of days between the receipt of final versions of accepted papers to Early View publication at 27-30 days. As shown in the tables below, this has not yet been achieved. In 2019, time from receipt of final version to Early View was 56 days for JVS (an increase of 3 days) and 56 days for AVS (a decrease of 1 day). We look forward to substantial decreases in 2020.

3. New Publishing Agreement with Wiley

Journal of Vegetation Science

Year	Volume	Number of Issues	Number of pages	Number of articles	Average days from receipt at Wiley to Early View publication	Average days from receipt at Wiley to print publication
2019	30	6	1,250	113	56	119
2018	29	6	1,088	106	53	131
2017	28	6	1,274	121	52	133

Applied Vegetation Science

Year	Volume	Number of Issues	Number of pages	Number of articles	Average days from receipt at Wiley to Early View publication	Average days from receipt at Wiley to print publication
2019	22	4	600	52	56	128
2018	21	4	728	64	57	163
2017	20	4	747	66	51	145

Our current publishing agreement with Wiley expires at the end of 2020, so we are currently in the process of negotiating a new 5-year agreement, which will cover 2021-2026. In December 2019, IAVS signed a letter of intent to enter into negotiations, with the intention of having a new publishing agreement in place to commence on 1 January 2021.

The Publications Officer attended the British Ecological Society annual conference in Belfast in December 2019 and met with our Wiley publishers, Carol Clark and Adam Wheeler. Following the meeting, Carol sent us a detailed initial proposal for a new publishing agreement, which is included as an attachment to the Council meeting agenda (IAVS Proposal Dec 2019 Confidential).

The proposal included three major changes to our existing agreement, which were:

1. Both JVS and AVS to move to being published on-line only (no printed copies) and a continuous publication model (articles published as soon as the final PDF is ready).

2. To change the revenue sharing method from the current profit-share model (in which IAVS receives 57.5% of the net profit from publication of the journals) to a royalty-based model (in which IAVS would receive 51% of the gross income).

3. To transition AVS to a gold Open Access journal in 2021 with an Article Publication Charge (APC) of £1,900, increasing by 3% per annum. At current exchange rates, the proposed APC is $2,380 or 2,100 EUR.

The Wiley proposal was discussed by the Publications Committee and Governing Board, with input from the Chief Editors of JVS and AVS. The consensus was to accept point 1, since print runs of both journals are very low and have been steadily declining each year. It was decided to seek more information about point 2, to clarify the difference between the two revenue models and understand the rationale for the suggested change. Point 3 was the most controversial, with many concerned that some IAVS members may not be able to afford to publish in an Open Access AVS, given the proposed APC and the lack of institutional or granting agency support. In February 2020 the Publications Officer sent a response to Carol Clark, which approved point 1 but sought more information about points 2 and 3. This response is included as an attachment to Council meeting agenda (Response to Wiley Proposal 18 Feb 2020).

A detailed reply, with answers to our many questions, was received from Carol Clark on 7 May 2020 and is included as an attachment to the Council meeting agenda (Wiley Response May 2020). I will summarize the main points below. Discussion by Council of how we should proceed in negotiations for a new publishing agreement will take place later in the meeting and Carol Clark will be present to answer any further questions. We do not expect to reach a decision on the main points (whether to move to a profit-share model and whether AVS should become Open Access) at this meeting. Over the next few months, after we gather further information and carefully consider all the issues involved, we will conduct a Council vote by e-mail. The Governing Board and Publications Committee will then work to ensure that a new publishing agreement that conforms to the principles approved by Council will be in place by 1 January 2021.

JVS and AVS Moving to On-line Only

We approved this and Wiley has undertaken to move both journals to on-line only as from 1 January 2021.

Continuous Publication

Wiley explained some issues surrounding continuous publication that we need to be aware of before making a final decision to make this transition. These will be discussed with the Publications Committee and Chief Editors of JVS and AVS and carefully considered by the Governing Board before we make a recommendation to Council on whether we should make this change.

Revenue Sharing Model

The difference between the current profit-share model and the proposed royalty model is that the royalty model does not include any of the costs associated with publication. The accounting with the royalty model is therefore simpler and less costly. The gross income received (subscriptions and/or APCs) would be divided, with IAVS receiving 51% and Wiley 49%. Initially, this would result in a lower profit for Wiley, since all their costs would be deducted from their share. As explained later, it is Wiley's intention that, with the move to on-line only (and the proposed move to Open Access), we would be able to increase the number of papers published in each journal. They are proposing an increase of 10% per year in output. If we went Open Access, this would translate to an increase in gross income from APCs and hence an increase in our revenue share of about 10% per year.

Moving AVS (and later, JVS) to Open Access

Under Wiley's original proposal, transitioning AVS to Open Access in 2021 would have required IAVS to make a decision by 1 May, 2020. We explained that it would be impossible to reach a decision on such a major change without much more time for discussion and research. Consequently, Wiley is now proposing that AVS move to Open Access in 2022 and a decision on that is required no later than 1 May, 2021. In the original proposal, it was stated that JVS was not suitable for a transition to Open Access at this time and the implication was that JVS would remain as a hybrid journal (subscriptions and optional Open Access) during the life of the new publishing agreement (2021-2026). In the

response to our questions, Wiley is now proposing that JVS could be transitioned to Open Access a few years after AVS. Presumably that would be specified in the new agreement.

Since 2012, Wiley has successfully transitioned 34 journals to Open Access. They provided a case study of *Global Change Biology Bioenergy*, which made a very successful move to Open Access in 2016, and testimonials from some other journals that have made the transition. The Publications Officer contacted Dr. Martin Parry, Publications Officer at the Society for Experimental Biology, and asked about his experience with the transition of the *Plant Biotechnology Journal* to Open Access in 2016. He said they were very happy with the move and did not experience any negative consequences. These examples are journals that mostly publish applied research, hence Wiley considers they are relevant to the proposal to transition AVS. One major difference is that these are among the leading journals in their fields.

One of our major concerns was the ability of our members to afford the proposed APC. Wiley's response was to offer all IAVS members a 20% discount on the APC. In addition, they outlined the deals that have been reached in several countries, whereby universities and other institutions pay all or part of the APCs for their researchers. Though the number of such deals is increasing, there are still many countries where there is little support for APCs. Should we wait a few years and see how widespread such support has become before deciding to make the transition? One thing that Council might consider is whether IAVS should conduct surveys of its members and previous authors of papers in AVS and JVS, asking them whether they do have support for the proposed APC and whether they would be able to publish in AVS if we decided to go Open Access. Wiley rejected our suggestion to consider a lower APC and a schedule of discounts (as we have implemented for our new journal, *Vegetation Classification and Survey*, discussed later in this report). They claim that low APCs are associated with poor-quality and predatory journals and that the APC they propose is appropriate for journals of the quality of AVS (and JVS). They do propose to offer lower APCs to people in developing countries. Wiley did not offer any justification for increasing the APC by 3% per year.

It is clear in Wiley's response that, as mentioned in the discussion of the revenue model above, they expect a move to Open Access to be accompanied by an increase in the volume of papers published on the order of 10% per year. Though Martin Parry said that the *Plant Biotechnology Journal* was able to achieve this by appointing additional editors, we have to carefully consider whether this is feasible or desirable for our journals. The Chief Editors of our journals do not think that such growth is feasible, given the difficulty of finding reviewers who are willing and able to do timely reviews for the current volume of submissions. Though the volume of high-quality submissions may be growing at 10% in some subject areas, what is the evidence that this is the case in plant ecology? Do we want to achieve a 10% increase in revenue per year on the free labor of already hard-working editors and reviewers?

I think most of us would agree that the principle of open science is good, making research results freely available to everyone, rather than just those whose institutions have subscriptions. This benefit has to be weighed against the costs to authors to have their research published. One unintended negative consequence of journals going Open Access could be that authors from institutions who have not signed on to any deals to pay APCs or who do not have external grants for which the funding body has agreed to pay the APCs cannot afford to have their research published in "good" journals, with negative effects on their prospects of tenure and promotion. Authors who do have funding sources to pay APCs and who want to embrace the principles of open science already have the option to publish Open Access in AVS and JVS under our current hybrid model.

4. New Journal: Vegetation Classification and Survey (VCS)

End of our Association with *Phytocoenologia*

Phytocoenologia had been published since 1973 by Schweizerbart and Borntraeger science publishers "in collaboration with the International Association for Vegetation Science". Since 2014, publication was under a Memorandum of Understanding (MoU) between Schweizerbart and Borntraeger and IAVS. Due to a failure of Schweizerbart and Borntraeger to abide by the MoU and address several major problems, the Governing Board of IAVS voted to cancel the MoU in April 2019. The Chief Editors of *Phytocoenologia*, all active members of IAVS, agreed to handle papers for that journal until the end of 2019.

Vegetation Classification and Survey (VCS)

In February 2019, the Chief Editors of *Phytocoenologia* contacted Pensoft, a company which publishes many online journals. Pensoft expressed great interest in becoming the publisher of a new journal with a similar scope to *Phytocoenologia* as a totally Open Access journal. In June

2019, the IAVS Governing Board and Publications Committee asked IAVS Council vote on the following three-part proposal:

- That IAVS is authorized to contract with Pensoft to publish a new Open Access journal similar in scope to *Phytocoenologia* and with a working title of *Vegetation Classification and Survey*.
- That the IAVS Publications Committee, in collaboration with the Chief Editors of the new Open Ac-

cess journal is authorized to draw up a schedule of Article Publication Charges (APCs) that will raise the annual fee of 3000 EUR plus the 650 EUR per article charged by Pensoft and provide a modest annual profit to IAVS, while providing discounts to IAVS members, those from low-income countries or those who are in financial hardship, and members of the editorial team for the new journal. The Publications Committee and Chief Editors would be free to devise whatever schedule of APCs they considered appropriate.

• That the IAVS Governing Board is authorized to pay Pensoft the once-off start-up fee of 3000 EUR, together with any shortfall in fees for the first two years of operation of the new journal, to a maximum of 15,000 EUR per year. Though the schedule of APCs will be designed to cover all fees, there may be a transition period as the new journal becomes established during which some financial help from IAVS may be needed.

The proposal was approved by a large majority (76% of Council membership). After negotiations with Pensoft, the Governing Board, with the advice of the Publications Committee contracted to start a new journal, *Vegetation Classification and Survey* (VCS) in 2020. The four former Chief Editors of *Phytocoenologia*, Jürgen Dengler, Idoia Biurrun, Florian Jansen, and Wolfgang Willner agreed to serve as the Chief Editors of VCS. A schedule of APCs was developed in consultation with the Chief Editors and the Publications Committee and approved by the Governing Board. It provides discounts to IAVS members, members of the editorial team, and authors who are unable to afford the full APC. The APC also varies with the length of the paper. For 2020, the "base APC" for a standard length paper (11-20 pages) was set at 600 EUR and the schedule is as follows (see the table).

It is intended to raise the base APC to 850 EUR in 2021 and to 1,100 EUR from 2022 onwards. A base APC of 1,100 EUR was estimated (based on data from papers published in *Phytocoenologia* between 2014 and 2018) to return a small profit to IAVS. It may have to be adjusted once we have data from the first two years of VCS. As approved by Council, IAVS will make up any shortfall in income during the first two years (to a maximum of 15,000 EUR). The aim is to have VCS become self-sustaining by 2022.

VCS was officially launched on 4 May 2020 and six papers had already been published by the end of June. The Chief Editors of VCS in their report (attached to the Council meeting agenda) note that, in order to receive an Impact Factor, VCS will need to publish an average of more than 20 papers per year over a period of 2-3 years. To ensure the success of our new journal, we strongly encourage IAVS members to contribute papers and to encourage their colleagues to also consider VCS for papers that fall within its scope.

5. IAVS Bulletin

Monika Janišová, has continued to do a great job as editor of the IAVS Bulletin. Anna Kuzemko assists with layout and design and several people help with linguistic editing. The Bulletin is e-mailed directly to IAVS members and also made available through the IAVS website. Monika is always seeking contributions for the Bulletin. If you have an idea for an interesting article, please contact her (monika.janisova@gmail.com).

Table 1. The approved schedule of APCs for Vegetation Classification and Survey in 2020.

Base fee 2020			**Author group**				
600 €				**IAVS Member**	**Chief or Associate Editor**	**Financial Hardship[1]**	**Extreme Financial Hardship[2]**
			Regular	**EdBoard member**	**Linguistic Editor**	**Country group 2[3]**	**Country group 3[4]**
			0%	**-10%**	**-20%**	**-40%**	**-80%**
		Factor	**100%**	**90%**	**80%**	**60%**	**20%**
Article length (print pages)	**1-2**	**25%**	150 €	135 €	120 €	90 €	30 €
	3-6	**50%**	300 €	270 €	240 €	180 €	60 €
	7-10	**75%**	450 €	405 €	360 €	270 €	90 €
	11-20	**100%**	600 €	540 €	480 €	360 €	120 €
	21-40	**125%**	750 €	675 €	600 €	450 €	150 €
	>40	**150%**	900 €	810 €	720 €	540 €	180 €
Editorial			0 €	0 €	0 €	0 €	0 €

[1] Defined as an annual income of less than 50% of the per capita income for the group 1 country of residence
[2] Author would need to contact the editor and provide evidence of extreme financial hardship
[3] Countries with a per capita income between US$10000 and US$24999
[4] Countries with a per capita income less than US$10000

Report of Chief Editors of JVS and AVS to the IAVS Council

by Milan Chytrý (Chair of the Editors), with Alessandro Chiarucci, Meelis Pärtel and Valério Pillar

Journal of Vegetation Science (JVS) and *Applied Vegetation Science* (AVS) are published bimonthly (JVS) and quarterly (AVS). They are run by an international team of four Chief Editors, 43 Associate Editors, 41 Editorial Board members, and the Editorial Office and Production run by Wiley. Milan Chytrý acts as the Chair of the Editors, Meelis Pärtel and Valério Pillar as the Receiving Editors for JVS and Alessandro Chiarucci as the Receiving Editor for AVS. Carol Clark is the Senior Journals Publishing Manager, and Hoshia Rose is the Production Editor at Wiley. The other staff members in Wiley changed since the last year: Georgie Smith is the Journal Publishing Assistant, Hannah Procter is the Production Manager, Vicki Pang is the Associate Managing Editor, and Vanaja Jeyakumar is the Editorial Assistant.

Since July 2019, all the journal issues were published on time according to the bimonthly or quarterly schedule. However, some issues had to be thinner if there were not enough papers prepared by the editorial deadline to fill in the projected page budget. This reflects the slightly decreasing number of submitted papers in the recent years.

After an increase of Impact Factors 2018, Impact Factors 2019 (published in July 2020) of both journals decreased again. The 5-Year IF has a decreasing trend for JVS and increasing trend for AVS. CiteScore (alternative journal metric published by Scopus) showed an opposite pattern: after a decrease in 2018, this metric increased for both journals in 2019

Both JVS and AVS started to use a new feature in the Wiley Online Library called Spotlights. Spotlights are collections of articles on specific topics. We decided to open Spotlights corresponding to some of our article types: Synthesis, Forum and, for AVS, Vegetation Survey. We also introduced a new article type Methods in Vegetation Science and opened a Spotlight collection of the same name. In each Spotlight collection, we included papers published in recent years, which were made Free Access by Wiley. All the new papers of the types corresponding to the Spotlight topics will be added to these Spotlight collections.

	2017	2018	2019
JVS			
IF	2.658	2.944	2.698
5-Year IF	3.404	3.392	3.177
CiteScore	5.3	5.1	5.3
AVS			
IF	2.331	3.568	2.574
5-Year IF	2.506	3.022	2.903
CiteScore	5.0	4.9	6.0

Both journals publish guest-edited Special Features, which are usually based on scientific sessions from the IAVS Symposia or activities of the IAVS working groups. Currently, there are five Special Features in preparation, four in JVS and one in AVS:

- Vegetation studies in permanent plots (JVS, edited by Francesco de Bello, Enrique Valencia, David Ward and Lauren Hallett)
- Dispersal and establishment as drivers of vegetation dynamics and resilience (JVS, edited by Péter Török, James Bullock, Borja Jiménez-Alfaro and Judit Sonkoly)
- Historical ecology in vegetation science (JVS, edited by Sara Cousins, Guillaume Decocq, Radim Hédl, Péter Szabó and Monika Wulf)
- Macroecology of vegetation (JVS, edited by Meelis Pärtel, Francesco Maria Sabatini, Naia Morueta-Holme, Holger Kreft and Jürgen Dengler)
- Remote sensing for vegetation science (AVS, edited by Duccio Rocchini, Hannes Feilhauer, Sebastian Schmidtlein and Jana Müllerová)

The Chief Editors and Wiley staff discussed the feedback from the authors collected through Wiley's programme Voice of the Author. In general, the authors of the published papers were satisfied with JVS/AVS editorial procedures. Still, some of them complained that formatted manuscripts were required for the first submission. Based on this feedback, we changed the policy, and introduced the Free Submission Format programme. Now the first submission may be in a format not strictly following JVS/AVS Author Guidelines, which is only required for revised manuscript versions.

JVS and AVS have established a partnership with Publons, a web service that is linked with Web of Science. It provides researchers with free web profiles showing publications and citations, but unlike other services, it also includes information on how many times the re-

searcher reviewed for which journals. If reviewers wish, the manuscript submission system automatically posts the information about the review (but not its content and not information about the reviewed manuscript) to their website on Publons. Using this option, researchers can publicly show that they are not only publishing their papers but also doing service to their academic community by reviewing manuscripts of peers.

In collaboration with Wiley, JVS and AVS are preparing for a shift to online-only continuous publishing beginning from January 2021. This change reflects the declining interest in hardcopy subscriptions. It will make it possible to publish the final versions of individual papers fast, without waiting for issue compilations.

We also continued with publishing the journals' blog, which was started in August 2018. The blog is edited by David Zelený, Viktoria Wagner and Peter Minchin. There is high interest among the authors of JVS/AVS papers to publish Plain language summaries of their articles or Behind the paper stories. By June 2020, the blog published 46 Plain language summaries, 16 Behind the paper contributions, 1 Comment (a book review) and 42 Editorial news. In 2020, the blog was extended to include the new IAVS journal, Vegetation Classification and Survey, and it was renamed from JVSAVSBlog to VegSciBlog. The blog posts are widely circulated in social media such as Facebook and Twitter. They are also regularly reposted through the official Twitter accounts of JVS and AVS and the Facebook group of IAVS and its working groups.

Any feedback on our work from the IAVS members is welcome.

Report of Chief Editors of *Vegetation Classification and Survey* (VCS)

by Jürgen Dengler, Wolfgang Willner*, Idoia Biurrun and Florian Jansen (*current chairs of the editors)*

After several months of intensive preparations, *Vegetation Classification and Survey*, the new gold open access journal of IAVS in the fields of vegetation classification and ecoinformatics, was officially launched on 4 May 2020 with the publication of six research papers, accompanied by an inaugural Editorial. As of 26 June, nine papers with a total of 122 pages have been published and are freely available at the journal website (https://vcs.pensoft.net/). Published by Pensoft on the scholarly platform ARPHA, the journal focuses on vegetation survey and classification at any organisational and spatial scale and has no restrictions on methodological approaches. Moreover, it has Permanent Collections on ecoinformatics and phytosociological nomenclature.

In the Editorial, we addressed the advantages and challenges of open access (OA) and share the ways VCS will handle those. We do not agree with the naïve view that "gold open access" will solve all problems in scientific publishing, just because the published content is freely accessible to anybody. Article processing charges (APCs) put barriers to many authors, not only from developing countries, to publish their good results, whereas the normal gold OA business model, in general, might incentivise quantity over quality. In the medium run, we see the best solution to overcome the profound draw-backs of the current gold OA model, by direct payments of science funders to scientific associations, like IAVS, for the production of quality peer-review journals, which are then free for both authors and readers. However, until such solutions are developed, we are striving to make the best of the situation. Thanks to the ownership and control by IAVS, VCS already now can ensure high scientific standards and relatively low APCs with considerable discounts for all those with financial constraints.

VCS has adopted the principle of "continuous publishing" to ensure the fastest possible publication of accepted papers. This means that there will be no difference between an online-early and a later definitive version, but the version first published online will already have the final page numbers, without waiting for the completion of an issue. This principle is beneficial for authors, but means that VCS will not have separate issues like traditional journals anymore. Instead, after completion of the articles of one volume (year), Pensoft will offer to order the complete volume in print form to

those vegetation ecologists who like to have additional hard copies of the valuable studies.

The cooperation of the Chief Editors with Pensoft runs smoothly. Together with Pensoft we could create an attractive Website and an attractive layout for the articles. While not everything in the manuscript management system was/is working as desired, Pensoft is always open to find pragmatic solutions. Most of the Associate Editors, Linguistic Editors and Editorial Board members of the former *Phytocoenologia* agreed to continue their function in VCS. Additionally, we appointed several new members to the Editorial Team to ensure broad topical coverage, while improving geographic and gender balance. We have now four Chief Editors and nine Associate Editors, coming from five continents and with a 46% fraction of female editors.

The Chief Editors are regularly informing the whole Editorial Team and interested scientists about the journal development via the *VCS Newsletter* (No. 1 published in February 2020, No. 2 scheduled for July 2020). VCS is now integrated in the journal blog of IAVS, and our authors and we editors are regularly using this opportunity. To increase the visibility, we further regularly inform IAVS members via the IAVS Bulletin, the EDGG journal *Palaearctic Grasslands* and the EVS mailing list. Our intention is to closely collaborate with those IAVS Working Groups and Regional Sections, whose activities fully or partly fall into the VCS scope. To this end, VCS publishes its Permanent Section on Phytosociological Nomenclature in cooperation with the GPN and the one on Ecoinformatics in cooperation with the GIVD Steering Committee (we offered a formal collaboration to the executive committee of the Ecoinformatis Working Group, but they were currently not interested). Moreover, a first Special Feature on classification of Palaearctic grasslands has recently been launched together with the EDGG. We will intensive such collaborations with IAVS subgroups and conferences in the future.

Currently, the main challenge for the journal is the fact that VCS does not have an Impact Factor yet, resulting in a low submission rate. Moreover, while APCs are low in comparison to other OA journals, they nevertheless pose an additional barrier to submissions, even for members of the Editorial Team. One needs to be aware that even authors from "rich" countries do not necessarily have access to institutional money to cover APCs! On the other hand, a journal needs to have a constant flow of publications (that should be reasonably cited) in order to be considered for inclusion into the Web of Science or the Scopus database. The exact numbers are not transparent, but based on Pensoft's experience with other new journals, it seems that a new journal must have published more than 20 articles per year over 2-3 years before one can hope for inclusion into these databases.

We try to overcome this challenge by active advertisement through various channels and organising Special Features. We count on all IAVS members interested in vegetation classification and survey, and on the members of the IAVS Council in particular, to help the new journal becoming a success by submitting at least one paper to VCS in the near future. As the agreed financial support of IAVS during the first two years with current submission rates will only be used to a moderate degree, we ask IAVS to consider higher discounts per article (without exceeding the approved overall amount of money). Such a further reduction of APCs could be general or directed only to certain submissions (e.g. from IAVS members or from activities of IAVS subgroups).

IAVS Meetings Committee report

by Javier Loidi (Chair), Guillaume Decocq, Jason Fridley, Gudrun Bornette, Meelis Pärtel, Valério Pillar, Jodi Price, Angelika Schwabe-Kratochwil, Franklin Scott, Otto Wildi

IAVS Symposium 2020

Vladivostok (Russia)

Annual Symposium of the IAVS, Vegetation in the Anthropocene, presented by Pavel Krestov, Botanical Garden-Institute, Vladvostok, Russia

The symposium was scheduled for 20–24 July 2020 but it was cancelled due to the Covid-19 pandemic. Some of the planned activities are being transferred to 2021 to be held in the 2021 Madrid symposium such as the Altai excursion:

Altai (Nikolai Ermakov). This is one of the most important biodiversity centers in Northern Eurasia. The wide range of altitudes, climate humidity and continentality allow the formation of a large number of zonal vegetation types. The excursion route will take place along the geographical transect crossing the ultra-humid, humid and arid geographical sectors of the mountain system. Participants will have the opportunity to visit the natural communities of North Asian and European-Siberian dark coniferous and light coniferous forests, the zonal types of West Palaearctic and Central Asian meadow-steppes, typical steppes and desert-steppes, as well as various types of high mountain vegetation. We will see remarkable landscapes of the Katun river valley, Kuraiskaya and Kosh-Agachskaya intermontane basins and the surrounding high mountain ridges.

IAVS Symposium 2021*

Madrid (Spain)

63rd Annual Symposium of the IAVS, presented by Daniel Sánchez-Mata, Dept. of Plant Biology, Complutense University, Madrid, Spain.

Venue: Facultad de Farmacia, Complutense University, Ciudad Universitaria, Madrid, Spain.

The Symposium will be held in Madrid, the current capital city of Spain. The historical origin of Madrid goes back to the IX century when the emir Muhammad I (852–886) orderered a fortress to be built on the river bank of the Manzanares river. This settlement was known as Mayrit (corrupted to Magerit by the Castilians) and was built over earlier ruins of the Visigoth period (VII century). The fortress was erected in the place currently occupied by the Royal Palace to control the mountain passes of the neighboring Guadarrama range. In the IX century, Madrid was incorporated into the Kingdom of Castile by king Alphonse VI (1083) and in 1561 is established as the permanent capital of the Spanish Monarchy by Philip II.

Madrid and its metropolitan area has a population of over 6 million inhabitants and has a very efficient public transportation network and many international flight connections. The cultural offerings are very rich, with an important number of outstanding museums, such as Museo del Prado, Museo de Arte Contemporáneo Reina Sofía, Museo Thyssen-Bornemisza or the Museo Arqueológico Nacional. A couple of emblematic historic cities are near to the capital city, such as Toledo, Segovia, Ávila, La Granja de San Ildefonso, Aranjuez or El Escorial, making possible for one-day visits to those places to be taken. The city has a large accommodation capacity that allows a large population of visitors to be hosted.

The symposium will take place in the Campus Moncloa (International Excellence Campus) of the Complutense University of Madrid, which provides all the facilities needed for such an event. The connection between the campus with the city is very easy and is provided by bus and by subway (only one station). The halls existing in the Faculty of Pharmacy will be available for the Symposium and there will be bar, coffee shop and restaurant facilities too.

The symposium will include an abstracts book, program, and excursions guides specially detailed for the pre- and post-symposium excursions. A conference website will be ready with basic information at least one year before the symposium.

Dates: The Symposium will take place between the 5th and 11th July 2021

Excursions:

The Pre-symposium excursion will take place between June 28th and July 2nd across southern Spain (La Mancha, Sierra Morena, Bermeja, Nevada and Cazorla). Objective: high landscape diversity including marsh and saltmarsh inland vegetation, and subbetic-betic mountain ranges (with the remarkable and endemic *Abies pinsapo* forests on serpentinized peridotites and the Sierra Nevada National Park, a true hot-spot for biodiversity, including a full hiking-day.

The Post-Symposium excursion is scheduled for July, between the 12th and the 16th. Objective: landscape diversity throughout the Iberian Central System (Spain/Portugal), including a full hiking-day. Preliminary itinerary: Madrid-Navacerrada-Cotos Pass (Sierra de Guadarrama National Park)-Segovia-Ávila-Hoyos del Espino (Sierra de Gredos Mountains Regional Park)-Béjar-Candelario-Peña de Francia-Serra da Estrêla (Portugal).

The Mid-Symposium one-day excursions. At least two or three one-day mid symposium excursions will be organized (Sierra de Guadarrama National Park, Toledo Mountains, southern Madrid areas, etc.).

It is expected that the Post-Symposium excursion will be coincident with the Altai excursion was being organized for 2020 so that participants will have the opportunity to choose between them.

Due to the pandemic evolution the Madrid meeting and excursions will be postponed to 2022 and an online symposium will be held on September 2021.

Report from the IAVS Global Sponsorship Committee: activities in 2020

by Alessandra Fidelis

In 2020, we have a new chair for the Global Sponsorship Committee, since David Zelený was appointed as the secretary of the IAVS. Alessandra Fidelis (Brazil) is the new chair of the committee, and the members are: Lauchlan Fraser (Canada), Alireza Naqinezhad (Iran), Peter C. le Roux (South Africa), Camilla Wellstein (Italy) and David Zelený (Taiwan).

GSC approved the following proposals:

The proposal of the European Vegetation Survey (EVS) steering committee for travel awards to support the 2020 European Vegetation Survey Meeting in Rome; 23 applicants applied, from which 18 were awarded, following the criteria set by the EVS Steering committee.

The GSC also received applications for travel grant for the Annual Symposium in Vladivostok, using the following selection criteria (iavs.org/Membership/Financial-Support.aspx):

1. Applicant must be a member of IAVS and give oral or poster presentation at the symposium. If you are not a member yet, you can join at the IAVS Membership Page (reduced and free membership is available for persons with financial constraints).

2. The applicant can be a student or researcher.

3. If the applicant has already received the grant for IAVS Symposium in the past two years, she/he can apply again but will receive only 70% of the total approved amount.

4. Applicants from high-income countries will obtain only 70% of the approved funding.

5. Evaluation by committee members is based on a) motivation letter (+CV) and b) abstract. The evaluation is done on scale 0 (poor) to 5 (excellent).

6. The final evaluation is including also professional age criteria: graduate (MSc or PhD) student = 5, post-doc = 4, researcher/professor/other = 2. This will be added to the table in the end.

7. The final calculation is based on the average from abstract + motivation letter/CV + professional age, with the following weights: abstract 2/5, motivation & CV 2/5, professional age 1/5.

8. The awarded budget is not based on the budget requested by the applicant, but on the budget estimated by GSC committee (estimated cost of flight ticket, early bird registration fee, budget accommodation – 1 person budget hotel room nearby the conference venue). Conservative criteria are applied: the applicant will not get a budgeted allocation that she/he did not request (e.g. if accommodation was not requested in motivation letter, it would not be awarded); on the other hand, if applicants requested a lower amount for an expense than we estimate the true cost to be (e.g. for accommodation), we use our estimate to make the award comparable to that received by others. Also, GSC does not support fee for social events (e.g. conference dinner) and pre- or post-symposium excursions.

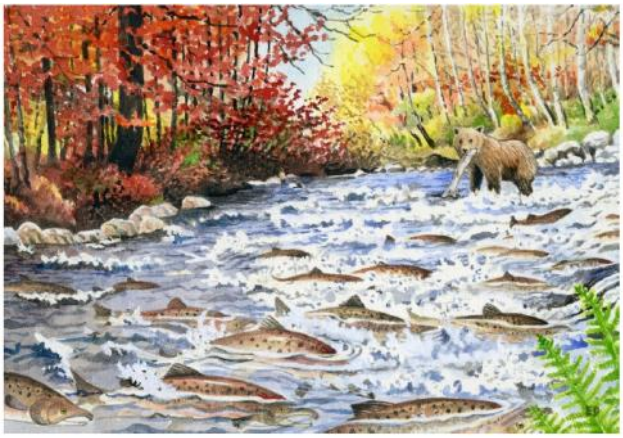
9. The total award (after discounts) should cover at least the price of the registration fee.

We have received 7 applications until 27th March 2020, from 6 countries (deadline was 30th March 2020). However, since the Annual Symposium was cancelled, the chair of the GSC wrote to all applicants about the symposium cancellation.

Report of the IAVS Award Committee

by Joop Schaminée, chair

At the annual IAVS meeting in Bremen (Germany), for the fifth time, the Alexander Von Humboldt Award was awarded to an outstanding scientist in the field of vegetation research. After awarding Professor Philip Grime in 2011, David Tilman in 2013, Sandra Lavoral in 2015 and F. Stuart Chapin III in 2017, Pierre Legendre received this award in 2019. To honor the price winner, an original watercolor painting was made for this occasion by the Dutch artist Ed Hazebroek, depicting the landscape of a Canadian river with salmons and a brown bear catching them. At the meeting in Bremen, a laudatio speech was given by Peter Minchin.



The members of the Governing Board were invited to nominate candidates for the next honorary member (deadline 31-12-2019). This election took place early 2020, with the result that Valerio Pillar will become our next IAVS Honorary member, for all the work he has performed for the organization for so many years. As the 2020 annual meeting, scheduled for Vladivostok, had te be cancelled because of Covid-19, the festivities will take place at the IAVS meeting in Madrid next year. At that meeting, Alicia Acosta will deliver a laudatio speech on him. Also, then Laco Mucina will deliver his speech for becoming an Honorary member of the IAVS in 2018 (it was delayed already twice). The laudatio, given by Milan Chytrý and Bob Peet, has been published in the IAVS Bulletin 2018/3, also worthwhile to have a look at because of some nice historic pictures.

At the meeting in Bremen, also the *young scientist competitions* took place, for *best poster* and *best oral presentation*. The winners were announced at the General Assembly and their names will be mentioned on our website www.iavs.org (see under Awards).

Report of the Ethics Committee

by Kerry Woods, chair

The Professional Ethics Committee, at the request of the Governing Board, worked on a revision of the IAVS Code of Professional Ethics. The new document incorporates a description of the Committee's charge and composition; procedures by which the Committee will operate in consideration of any grievances related to the Code of Ethics; and an outline of potential responses to violations of the Code. A draft of this revision is now in the hands of the President for review and consideration by the Governing Board.

Activity report for the Website and Social Media Committee

by Viktoria Wagner, Heike Culmsee, Gerald Jurasinski, and Florencia Yannelli

The Website and Social Media Committee was formed in September 2019 and currently includes four members Viktoria Wagner, Heike Culmsee, Gerald Jurasinski, and Florencia Yannelli. The Committee has met every 2nd or 3rd month. Accomplishments included:

- Provided recommendations for an improved website and website requirements (2x documents passed on to governing board),
- Compilation of a Twitter policy paper to help decide what can/cannot be posted (1x document passed on to governing board),
- Established new Twitter account @IAVSMeetings to disseminate details on meetings.
- Increased tweet/retweet frequency (we did not track any stats on this but since more people had access to the IAVS account, more tweets/ retweets were sent out).
- Provided recommendations for member engagement via social media, in lieu of the cancelled annual symposium.
- Related to point 5, we supported advertising of working group activities/events (e.g. IAVS Young scientists online workshop).

Things the committee would like to tackle in the next year:

- Update IAVS Wikipedia website (in prep)
- Establish Instagram account
- Advertise membership
- Launch campaigns for membership engagement via social media
- Tweet/retweet job advertisements (currently discussed)

Activity report for the Carbon Footprint Committee

IAVS Carbon Footprint Committee (Martin Diekmann, John Rodwell, Viktoria Wagner)

The committee had a virtual meeting in fall 2019. We agreed to (1) develop a draft for a sustainable event policy, (2) provide suggestions for hands-on measures to mitigate CO2 emission and waste for IAVS meetings, (3) provide quotes for services from sustainable event management agencies.

Achievements: We have started to work on a policy paper and have obtained a quote from a sustainable event management agency (MeetGreen). We will be likely able to share our policy draft and quote with the governing board in late summer/early fall.

Aims for the next term:

- Prepare suggestions for hands-on measures for IAVS meetings
- Share documents with the Governing Board.

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Connecting people during pandemic times

An international workshop with young vegetation scientists to address the future of the field

by Florencia Yannelli and Marta Gaia Sperandii

Participants of the IAVS Young Scientists workshop.

Our world's ecosystems are being subjected to significant anthropogenic changes: a considerable proportion of natural habitats have already gone lost (Secretariat of the Convention on Biological Diversity, 2020), and a number of ecosystem functions and services are being seriously impacted. We witness this phenomenon (and its consequences) in our everyday lives, and many of us as vegetation scientists deal with it, on an almost daily basis. In regular times, such topics would have been the core of lively talks and discussions during our annual IAVS symposium, which is an important occasion for vegetation scientists from all around the world to meet, present their work and exchange ideas. The spread of the novel SARS-CoV-2, however, changed everything and forced the Organizing Committee to give up our annual meeting. Although the cancellation of the 2020 Symposium in Vladivostok was sad news for many IAVS members, it was early career researchers such as the IAVS Young Scientists who most suffered its consequences. For us, the annual symposium means a crucial opportunity for showcasing our work, networking and, why not, finding a position.

That's where this story begins. As part of the Young Scientists Steering Committee, the cancellation of the IAVS annual symposium forced us to re-think most of our plans for 2020. So, like many last year, we went online! If one comes to think about it, online events have plenty of advantages: they tend to have lower organization costs, they allow developing more inclusive and accessible activities, and they considerably reduce our emissions. All in all, these events represent excellent chances to keep up the work on the most urgent matters, while still maintaining some sort of interpersonal contact.

Thinking on all limitations we faced as early career researchers, along with the consequences they might have for our future, inspired us to reflect on the future of vegetation science, especially in the context of global change. Given how limited resources often are, we thought that it would be beneficial for our discipline if we could identify and assess the key emerging challenges and opportunities in the near future. It turns out that horizon scans are the perfect exercise to accomplish this. Here, experts from a field come together to pinpoint the issues and opportunities in their discipline in order to draw attention to the most urgent topics that should be dealt with at a research- and/or decision making-level. Horizon scans are very popular in the field of Biological Conservation (see Sutherland et al. 2020 and Sutherland et al. 2021 as examples), but have been also carried out for Invasion Science (Ricciardi et al. 2017) and more general topics like teaching and learning Ecology (Cooke et al. 2020), to name a few. Vegetation science, however, has not undergone this much-needed type of exercise.

So, we put ourselves to work and organized an online workshop to bring together early career researchers, working on different aspects of vegetation science. The idea was to brainstorm about what is coming for the field and carry out a horizon scan. Since one significant criticism of previous horizon scans is that they tend to be gender, geographic and career-stage biased, we aimed to have a motivated and diverse group of people. We therefore opened a call for participants to contribute with topics that they thought would represent challenges or opportunities for the field in the coming 20 years, all while having in mind the thread posed by global change. The final list of participants included 23 people from Brazil, Argentina, Mexico, USA, Egypt, Nigeria, Ghana, Australia, Germany, Italy, France, Norway, UK, Slovenia, Serbia, Belgium, Spain and Indonesia (see participants list below). They represented different career stages ranging from MSc, doctoral candidates, postdocs, junior group leaders and lecturers and were or became members of our working group. The workshop took place during two days in October 2020.

Ideas submitted by participants included a myriad of topics not only directly related to the impacts of global changes, but also dealing with conceptual, methodological and learning tools expected to help advance the field in the near future. While some ideas related to novel technologies had already been identified in a recent Editorial appeared in the Journal of Vegetation Science (Chytrý et al. 2019), we tried to go deeper and discussed the specifics of how these methodological tools could advance vegetation science and what were the challenges ahead. We also recognized gaps in the field and new opportunities that will be necessary to better understand vegetation dynamics in a changing world, such as integrating different approaches for assessing long-term trends and temporal stability, or incorporating the study of novel ecosystems. Some topics dealt with the use of well-known techniques (e.g. classification) to ask new questions, especially now that we have an incredible amount of easily accessible large databases. Additional issues that were brought forward concerned the need to re-think the way we do research, teaching and policy associated to vegetation science. In this "post-truth" era, this is by all means a major challenge that we need to deal with if we hope to enhance trust in science.

Overall, the workshop sparked very interesting discussions and resulted in a manuscript that will be soon submitted for consideration. With this exercise we hope to emphasize the importance of paying attention to what early career researchers, particularly from underrepresented areas, conceive as the future of vegetation science. From our experience we learnt that carrying out an online workshop during these difficult times of lockdowns and isolation is a great opportunity not

only to create tighter networks within our community, but also to stay updated with what other vegetation scientists are working on and experience more inclusive collaboration modalities. All while reducing the carbon footprint of IAVS events, an issue that already emerged during the last general assembly and was mentioned in the IAVS Bulletin 2020/1.

All in all, we would like to express our gratitude for the financial and administrative support provided by the IAVS, but also for the encouragement we got from the Governing Board. If this piece made you curious about the topics emerging from this horizon scan, consider following us in Twitter and Facebook (@IavsYoung and IAVS Young Scientists in Facebook).

Further information

The workshop titled "Challenges to vegetation science in the face of global change – Perspectives from IAVS young scientists" was carried out on the 13–14th October 2020.

Participants: Florencia A. Yannelli, Bianca O. Andrade, Quadri Agbolade Anibaba, Manuele Bazzichetto, Gianmaria Bonari, Stefano Chelli, Timo Conradi, Mirjana Ćuk, Gabriella Damasceno, Edy Fantinato, Sonya R. Geange, Reginald Tang Guuroh, Mukhlish Jamal Musa Holle, Filip Küzmič, Jonas J. Lembrechts, Amarizni Mosyaftiani, Zarah Pattinson, Tijana Šikuljak, Juliana Teixeira, Enrico Tordoni, Cloe Xochitl Pérez-Valladares, Marta G. Sperandii

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Winter – hibernation time for the field studies

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Photo Competition for JVS/AVS 2021 cover pictures

The winners of the Photo Competition for JVS/AVS 2021 cover pictures are Hsun-Hung Chu and Adrián Purkart. The forerunners are Gianmaria Bonari, Nenad Jasprica and Ricarda Pätsch. All of them kindly allowed their photos to be published in the IAVS Bulletin, too. Thanks to the organizers and photographers!

A big tree with many epiphytes living on the branch so densely just like an apartment: a scene often seen in the cloud forests occurring in middle-elevation in Taiwan, where the environment is warm and humid. There are four genera (*Asplenium, Lemmaphyllum, Haplopteris, Goniophlebium*) and five species in the photo.

Oak wooded pasture in Panónsky háj (Šúr Nature Reserve), Slovakia, three years after restoration. After the cessation of traditional management in this habitat, it was overgrown by young trees that caused dieback of veteran oaks and decline of understorey biodiversity. Therefore, most of the young trees and shrubs were cut down, and cattle grazing was re-introduced. Only two years later, several rare, previously absent species of insects and plants were recorded.

This photo was taken during an IAVS excursion in 2019 on an intertidal salt marsh on Spiekeroog (Germany), part of the Wadden Sea world heritage site. The community shown grows at the mean low water line, forming a dense turf on bare, regularly flooded soil low in oxygen. In midsummer, lavender-colored flowers of *Limonium vulgare* dominate the photo.

The Dalmatian black pine (*Pinus nigra* J.F. Arnold subsp. *dalmatica* (Vis.) Franco) is endemic to coastal areas and islands off the coast of South Croatia (Eastern Adriatic, NE Mediterranean). On the islands and the Pelješac Peninsula, these forests occur in the belt above the forest of Holm oak (*Quercus ilex* L.) and Aleppo pine (*Pinus halepensis* Mill.), at altitudes from 450 to 850 m a.s.l. The soils are shallow, mollic leptosols or terra rossa. The populations from Pelješac are mostly restricted to dolomite substrate, and included within the *Erico-Fraxinion orni* Horvat 1959 alliance (relict *Pinus nigra* forests on dolomite and ultramafic substrates of the Dinarides, sensu *EuroVeg Checklist* by Mucina et al. 2016) of the *Erico-Pinetea* Horvat 1959. These forests have exceptional scientific, aesthetic and conservation importance. Photo: The plant association *Erico manipuliflorae-Pinetum dalmaticae* Trinajstić 1986. Stand from the St. Ilija Mt (820 m a.s.l.), above the town of Orebić, the Pelješac Peninsula, South Croatia.

Autumn aspect of coniferous forests with *Larix decidua* and *Picea abies* in the Alps (Braies Lake, Italy)

Mountain hay meadow of the Alps with *Trollius europaeus* (Compatsch, Italy)

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Invitation for joint research about plant diversity and nutrient availability in herbaceous vegetation

by Martin Wassen

Hi, my name is Martin Wassen and I invite vegetation scientists to participate in joint research about **plant diversity and nutrient availability**.

My work focuses on herbaceous ecosystems and one of my passions is the relationship between plant diversity and nutrient stoichiometry. I published several papers on that subject (see below). Up to now, I have built up a dataset of 1038 plots across Europe in which **vegetation recordings and C, N, P and K contents in above ground biomass** have been measured.

At the start of the Covid pandemic I thought about how to reach out to fellow vegetation scientists and plant ecologists and asked Dutch colleagues to join. This was successful and we succeeded to expand the dataset in 2020 by one third (from 673 to 1038 datapoints). However, the dataset is biased towards northwestern Europe (especially the Netherlands (58%) and towards wet and moist grasslands, fens and bogs. Now, I welcome samples from all over the globe (as long as they are taken in herbaceous ecosystems), in particular samples from other countries than the Netherlands, different climate zones and dryer habitats.

My request: The method is very simple. Vegetation scientists making a relevé in a herbaceous vegetation are asked to next to the relevé clip above-ground vegetation in a representative square of 30*30 cm. They are requested to air-dry the sample(s) and send it by surface mail to me.

My offer: I oven-dry the samples and determine C, N, P and K concentrations in the lab. The results and interpretation of the nutrient status are given to the participant and she/he is free to use the data in her/his own research project. Next, I add the data to the existing database and at the end of 2021 we statistically analyze the data and couple them to species trait data or geographic and environmental variables. This offers great opportunities for a nice research paper to be published together and I invite each participant to co-author such a publication.

Interested? Send me an e-mail and we will discuss further details. I am currently preparing a user-friendly app that enables participants to easily upload the necessary information that goes along with the relevé. If you like we can also do it in the old fashioned way: on paper or digitally via a form.

With kind regards,

Martin Wassen

(e-mail: m.j.wassen@uu.nl, URL: https://www.uu.nl/staff/MJWassen/)

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Studying herbaceous ecosystems in the Netherlands

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In-Memoriam of Salvador Rivas-Martínez

Dear Friends and colleagues,

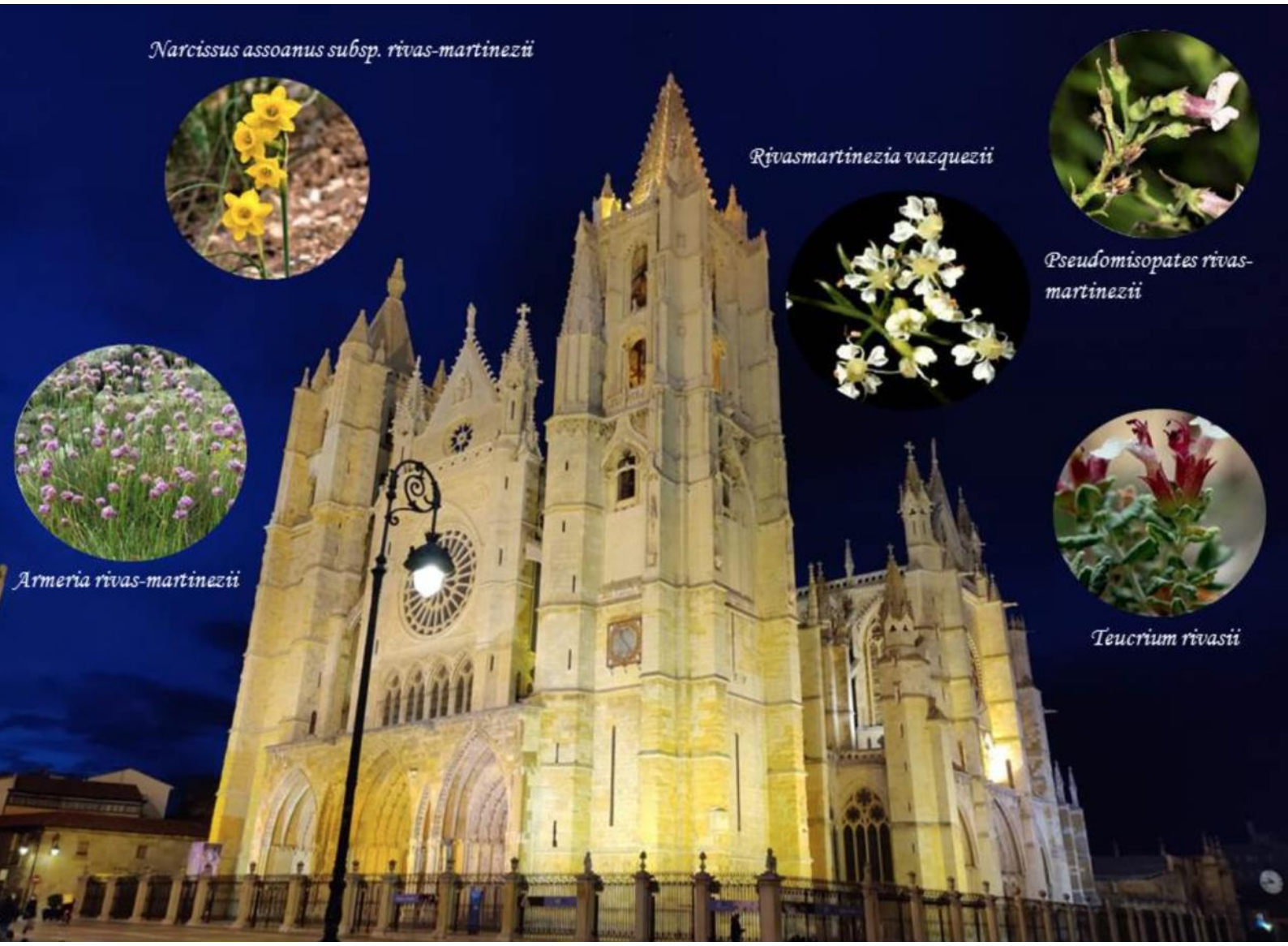
We hope to have your participation in the International Symposium in Honor of Professor Salvador Rivas Martínez, whose theme will be "**Geobotany in the XXI century**". It will be held at the University of León (Spain) from September 1 to 3, 2021

During its development, the In Memoriam of Prof. Dr. Salvador Rivas Martínez will take place.

The full scientific program and development of the Symposium, new updates and announcements about the meeting, will be announced on the Symposium webpage at https://simposiosalvadorrivasmartinez.com/. We look forward to welcoming you in León!

The Organizing Committee

Ángel Penas, Javier Loidi, Tomás Díaz & Joaquín Molero



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Heinrich Egon Weber (1932–2020)

Slightly modified English translation of the obituary published in 2020 in Tuexenia 40: 585-604 by the 'Floristisch-soziologische Arbeitsgemeinschaft'

by Jens Pallas, Münster, Werner Härdtle, Leuphana-Universität Lüneburg, Günter Matzke-Hajek

On May 2, 2020, our long-time and honorary member, Prof. Dr. phil. Dr. rer. nat. Dr. h.c. Heinrich E. Weber passed away at the age of 88. With him, the 'Floristisch-soziologische Arbeitsgemeinschaft' loses an outstanding vegetation ecologist and taxonomist who for many decades researched the ecology and biodiversity of ferns and flowering plants, especially the genus *Rubus*, in Europe.

Education and life journey

Heinrich Egon Weber was born on March 27, 1932 in Osnabrück. His musical talent was encouraged early on by his father, who was a professional music teacher, composer and choirmaster. Music and musicology were therefore a lifetime field of activity and a passion of his. His second interest was in biology, and even before studying biology, he began to systematically investigate the vegetation of moor and heathland landscapes in north-western Lower Saxony.

After graduating from high school in 1951, he spent two years at the 'Konservatorium Osnabrück' preparing for his entrance examination to the 'Staatliche Hochschule für Musik' (Music Academy) in Hamburg, where he took up his study of music in 1953. He graduated in 1956 with the 'erstes Staatsexamen für Musik im Höheren Lehramt' (first degree required for teaching).

In 1953 he began, in parallel, studying biology, soil science and musicology at the University of Hamburg and graduated in 1960 with the 'erstes Staatsexamen für Biologie für das Höhere Lehramt' (first degree required for teaching biology at high school level). Only one year later, he completed his doctorate in musicology at the University of Hamburg with a thesis entitled "Die Beziehungen zwischen Musik und Text in den lateinischen Motetten Leonhard Lechners" ("The relationships between music and text in Leonhard Lechner's Latin motets"). He continued his study of biology, moving in 1962 to the University of Kiel, where, in 1967, he received his second doctorate, this time in botany, under

Heinrich E. Weber 1995 putting brambles collected during a field trip in the herbarium press

the supervision of Prof. Ernst-Wilhelm Raabe at the 'Botanisches Institut der Universität Kiel' with a thesis on "Die Vegetation der Knicks (Wallhecken) in Schles-

wig-Holstein" ("The vegetation of 'Knicks' (wall hedges) in Schleswig-Holstein"). He remained at the 'Botanisches Institut der Universität Kiel' as a research assistant of Prof. Raabe until 1968.

In 1972, after a short internship and while still working as a high school teacher, he completed his 'habilitation' treatise (academic qualification required to apply for regular professorships at German universities) with the title "Die Gattung *Rubus* L. im nordwestlichen Europa" ("The genus *Rubus* L. in northwest Europe", see below), and one year later, in 1973, he received three offers of a professorship from different universities in northern Germany, all within a short period of time. He decided on the 'Universität Osnabrück, Abteilung Vechta' (University of Osnabrück, Vechta Campus) where he became Professor of Botany and the Didactics of Biology. He remained in Vechta until his retirement in 2000.

Scientific work

Many of Heinrich E. Weber's works and publications set scientific standards on both a national and an international level. His scientific work comprises about 300 scientific publications in German and international journals as well as several book publications.

The name Heinrich E. Weber is primarily associated with his impressive work in the field of batology, the science of brambles. Experts speak of Heinrich E. Weber as the "bramble pope". Even those who did not know him personally recognize immediately who is meant when the keyword "the *Rubus* Weber" is mentioned, because the taxonomy, nomenclature and distribution of European brambles were the focus of his research for more than 55 years.

He first became involved in this acanthus topic while working on his doctorate about hedgerows. Weber

Heinrich E. Weber and Reinhold Tüxen 1978 during the annual meeting of the 'Floristisch-soziologische Arbeitsgemeinschaft' in Bremen, photo provided by I. Cordes.

received help familiarising himself with the complex genus of brambles from Alfred Neumann (1916–1973), Vienna, and Albert Schumacher (1893–1975), Waldbröl. Like Neumann, he quickly became convinced that for a reliable knowledge of the species it was essential to verify the determined species by comparing them with authentic herbarium specimens of the first descriptor. If such reference voucher specimens were not available, only a study of the living plants at the original sites could help – ideally, both routes were taken in parallel. Weber's analytical talent and his practiced visual memory, coupled with the ambition not only to master the task, but to immediately set new standards, earned him his second doctorate and a reputation as an outstanding *Rubus* expert in northern Germany.

The knowledge he gained while working on his dissertation about the bramble species in northern Germany, Scandinavia and Lower Saxony was summarised in 1972 in a book of over 500 pages: "Die Gattung *Rubus* L. im nordwestlichen Europa". He illustrated many of the species described therein for the first time with full-page photos and line drawings of important details, thus laying the foundation stone for a renaissance of *Rubus* research on the European continent.

In the course of this research, Weber had established contacts with many experts at home and abroad, exchanged viewpoints with them or even helped them to familiarise themselves with the species group by revising their herbarium specimens. In this way, he was soon able to gain a good overview of the *Rubus* floras in different regions of Central Europe. When he moved to the University of Osnabrück, Vechta Campus, he was able to devote himself to this research topic in a professional capacity. Visits to colleagues and friends, but also private trips and excursions associated with congresses, gave him ample opportunity in the following years and decades to collect samples in many areas of Germany, as well as in neighbouring countries, and to study the species inventories. In order to be able to efficiently dry great quantities of collected material, he used a perfected herbarium press with a heat lamp and camping stool, for the construction of which he wrote a small guide in 1977. This construction, jokingly known as the "Weber grill", has found many followers. The enormous yield of his endeavours includes several 10,000 exsiccates in the 'Herbarium des Botanischen Gartens und Botanischen Museums' in Berlin-Dahlem. In the Index Herbariorum, an international directory of all herbaria, Weber's collection ranks among the 50 most important individual collections preserved in Berlin. He also perfected his practical work on original documents by taking photos of potential type material during his mostly multi-day visits to herbaria in Central Europe and Britain. To take these photos he developed special mobile lighting technology. The photos taken in this way are not only rich in contrast and image sharpness, but they also appear vivid and, despite their small size, are so rich in detail that even leaf veins and hairs can be studied at a later date. He described the secret of this unrivalled method in 1995 in a short essay. Modern high-resolution scans, which can be called up and viewed from almost anywhere in the world on the Internet, do not achieve the quality of Weber's photographs in terms of spatial effect.

Weber's average annual output of five scientific publications on *Rubus* has added up over the decades to an impressive list with a total of around 200 titles. Thematically, these range from new descriptions of unrecognized taxa to revisions of difficult species groups and nomenclature discussions to herbarium revisions and the representation of regional *Rubus* floras on the basis of his own mappings. Several extensive works stand out: for example, his "Revision der Section Corylifolii" (1981), which covered northern Central Europe and Scandinavia, the "Rubi Westfalici" (1986), his revision of the genus *Rubus* for the Hegi (1995) and volume 15 of the "Atlas Florae Europaeae" (2010), which is exclusively dedicated to the presentation of the distribution of the different bramble species. This 362-page atlas was essentially Weber's work. Not to be forgotten are the *Rubus* distribution atlases for the German federal states of Schleswig-Holstein, Lower Saxony and Saxony-Anhalt, as well as his *Rubus* adaptations for standard floras such as the "Rothmaler" and the "Oberdorfer", some of which have been updated over several editions.

Heinrich E. Weber 2004 behind his house in Bramsche-Achmer presenting *Rubus sylvaticus* (teste G. Matzke-Hajek), a section of the middle of the stem and a part of the inflorescence form a complete herbarium specimen, photo E. Garve (†)

The scientific appreciation and reputation that Heinrich E. Weber received as a batologist in Germany, in other European countries and as far away as Japan and Australia reflects only the academic side of his person. Much more prevalent in the memories of many of his contemporaries is the kind and amicable way in which he exchanged taxonomic viewpoints with colleagues interested in botany or interacted with them on visits and joint excursions. Over a period of more than 25 years he was the driving force and scientific hub of numerous "*Rubus*-Konzile" ("*Rubus* Councils") that were held from the early 1990s onwards, first in the Rhineland and Bavaria, and later in other German federal states and neighbouring countries. His unsurpassable way of spicing up taxonomic problems with ease, humour and creative language will remain unforgettable. The evening review of herbarium specimens "retrieved" by the participants or the revision of entire scientific collections over the course of several years were instructive and at the same time highly entertaining events. The same applied to the lectures with which he sought from 1973 onwards to attract members of scientific associations, students at universities and other interested parties to batology. After just a few sentences he sprinkled in small punch lines that made the audience first smile but soon laugh heartily. The content itself never faded into the background; on the contrary, his linguistic images and comparisons made the topic much more catchy and effectively anchored it in his listeners' memories.

Experts honoured the bramble researcher Weber during his lifetime by naming a total of five newly discovered *Rubus* species after him. These dedications were an expression of gratitude for the selfless professional support that Heinrich E. Weber gave to anyone who sought his scientific advice.

Weber himself described or named, if we can trust the IPNI database, almost 200 different species of plants, 190 of them alone *Rubus* taxa. The number of nomenclatural types that Weber selected is even higher: there are no fewer than 700!

Weber's scientific importance for European batology was first extensively recognized in 1997 in a commemorative publication on his 65th birthday. In this volume, Heinz Henker, now honorary chairman of the 'Arbeitsgemeinschaft Geobotanik Mecklenburg-Vorpommern', aptly characterised Weber's achievement (translated from German): "He succeeded admirably in critically appraising the taxonomy and nomenclature of the very discredited genus *Rubus* and revising new ways of coping with the almost insoluble species delimitation. In the meantime, Weber's principles have been accepted by almost all batologists and used as the basis for their own work. The great importance of Weber's work can only really be assessed by someone who has dealt intensively with the *Rubus* genus himself!"

Heinrich E. Weber, with his inimitable combination of scientific acumen, philanthropy and ingenious didactics, has succeeded in making research into brambles a serious science in neighbouring regions of the European continent. In more than a dozen European countries there is a generation of *Rubus* experts who have received the decisive impetus for their own research from Heinrich E. Weber, either personally or through his scientific publications. In 2009 he lovingly portrayed many of them in his compilation "Batologici Europaei illustrati et breviter descripti" – freely translated: "The European bramble researchers in pictures and brief descriptions".

His "training" in idiotaxonomic nomenclature during his intensive work on brambles led Heinrich E. Weber to phytosociological nomenclature. Since the first edition of the 'International Code of Phytosociological Nomenclature' (ICPN) was published in 1976, he was in constant contact with the 'Standing Committee of the Nomenclature Commission', then consisting of J. J. Barkman, J. Moravec, and S. Rauschert. In those times, however, the following was true: "The consideration of rules when naming plant communities was something exotic at that time" (WEBER 2009, translated from German). Heinrich E. Weber was co-opted by the NC before the second edition of the ICPN was published in 1986. On April 10, 1988 he was elected President of the Nomenclature Commission (NC) of the International Association for Vegetation Science (IVV, IAVS) and the Fédération Internationale de Phytosociologie (FIP), during the IAVS symposium in Frascati, Italy, having been nominated by Barkman, who resigned from the position of President for reasons of age.

Publications on phytosociological nomenclature by Heinrich E. Weber appeared in 1988, 1993, 2000 (ICPN ed. 3), 2001 (ICPN ed. 3, German translation), 2003 and 2011. In 1988 he published a checklist to verify the validity of associations and proposals for improving the ICPN. All proposals have been incorporated into ICPN ed. 3.

As president of the NC, he helped to secure a general acceptance of the rules when (WEBER 1993) he made a clear statement (translated from German): "For a long time, in particular those plant sociologists who set the tone considered it their right to name syntaxa at their own discretion, that is, to declare some names unsuitable and then to replace them by self-invented 'more suitable' names. So it is only too understandable that some leading syntaxonomists regarded the emerging nomenclature regulations as a narrowing of their 'ex cathedra decisions' […]."And further: "A natural science that would not address the important question of terminology based on objective circumstances, but left nomenclature to the taste of certain editors or outstanding personalities to treat it 'in the manner of a landlord', surrendered itself not only to ridicule, but also to chaos [...]." Together with the ICPN ed. 3 from

2000, this publication is Weber's most important on syntaxonomic nomenclature issues. According to WEBER (1993), the ICPN can only benefit from the experience of idiotaxonomy: "Botanical idiotaxonomy is many decades ahead of botanical syntaxonomy [...]." (translated from German). At the suitable opportunity, he added: "We do not need to invent the wheel twice." The code is only intended to provide formal legal tools that are compiled according to objective criteria and with which a hierarchical system of units can be administered well. This is the essential parallel to the other nomenclature codes. As in other codes, these tools include the principle of priority and the method of the nomenclatural type. The priority principle alone provides the necessary objective measure. "Nomenclature rules may therefore only set up objectively manageable rules for the valid publication, acceptance or rejection of names, but cannot distinguish between 'good' and 'bad' scientific work ...", (WEBER 1993, translated from German). Heinrich E. Weber has always emphasized: "Priority always applies only to the particular rank." The type method treats a single vegetation relevé, parallel to the type specimen of the idiotaxonomy, as the nomenclatural type (name-bearing type) of an association, the basic rank of the system, or a subassociation, its supplementary rank. The name remains permanently linked to this relevé. In WEBER's (1993) opinion, the ICPN should stay out of all content-related questions, since it cannot conclusively resolve them. He did not like it when you "cannot keep the formal and the content apart". For example, he was always suspicious of people who wanted to see the call for character species especially for associations anchored in the code.

As president, he chaired the general assembly of the NC from 26–27. February 1997 in Hannover to prepare the new edition of the ICPN and he was ultimately responsible for the third edition published in 2000 with J. Moravec and J.-P. Theurillat as co-authors (ICPN ed. 3). Essential innovations of this edition were the introduction of nomina conservanda, the non-acceptance of 'associations' of the Scandinavian school – albeit with the exception that they might be accepted as nomina conservanda – the treatment of superfluous names (nomina superflua) as illegitimate names and the demand for the name-giving species in the type relevés of associations and sub-associations.

In WEBER 2003, he published another 'determination key' for checking the validity of syntaxa names. However, this was connected with the warning (translated from German): "If you cannot overcome your aversion to such regulations, then you should concern yourself neither with idiotaxonomy nor with syntaxonomy."

After 21 years, on November 18, 2009, Heinrich E. Weber announced his resignation as President of the NC on grounds of age (77). This was followed by a reorganization of the NC under the IAVS umbrella as the Working Group for Phytosociological Nomenclature (GPN).

The 'Committee for nomina conservanda, ambigua, inversa et mutata' (CNC), the formation of which was decided in Hanover 1997 and which consisted of G. Grabherr, J. Pallas, H. E. Weber & W. Willner, published its first and to date only report in 2011. Its successor is the 'Committee for the Changes and the Conservation of Names' (CCCN), of which Heinrich E. Weber remained a member.

After the election of a 'Steering Committee' (SC), which replaced the 'Standing Committee' of the ICPN ed. 3, Heinrich E. Weber was called in as former President from 2014 onwards to prepare the fourth edition of the ICPN. He ran for election to the SC at the beginning of 2018 for the period 2018 to 2022, but was not elected. J.-P. Theurillat, chairman of the re-elected SC, nevertheless called him in as co-author of the fourth edition, but he no longer held a central position of responsibility.

Heinrich E. Weber was a godsend for syntaxonomic nomenclature. With him, the phytosociological community loses one of the most important personalities in this field of work. He was instrumental in the implementation of the nomenclature rules and helped secure an unexpected degree of acceptance of these rules. Thanks to his perception and quick grasp of facts, it was not difficult for him to master the "internal logic that is not easy to understand" of the nomenclature codes, as he admitted in restful moments. Therefore, he was aware that it would not be possible to achieve a comprehensive overview without a long and intensive examination of the matter that binds efforts. Those who wanted to learn from him could be sure of his friendly advice and support, in the form of his mailbox as an "international nomenclature trouble box", as he put it in 2009, or in the form of the "nomenclatural telephone

Heinrich E. Weber in May 1992 resting during a field mapping meeting in Lohne, Landkreis Vechta, photo E. Garve (†)

crisis helpline". Even for the experienced, he was always the last resort for all difficulties and unexpected problems. The future will tell whether the big gap created by his loss can be closed.

As the above-mentioned examples of his work on batology and syntaxonomic nomenclature show, the love of scientific detail was an essential characteristic of Heinrich E. Weber's research. It is probably one of the reasons why many of his publications have become standard works that are to be found on the bookshelves of nearly every vegetation ecologist. These include – in addition to the works already mentioned above – books such as "Ökosysteme Mitteleuropas aus geobotanischer Sicht: Gebüsche, Hecken, Krautsäume" ("Ecosystems of Central Europe from a geobotanical point of view: bushes, hedges, herbaceous fringe vegetation"), floral works such as his 770-page "Flora von Südwest-Niedersachsen", and three booklets (Nos. 4–6) on the"Synopsis der Pflanzengesellschaften Deutschlands", to name just a few examples. He contributed to the "Atlas der Farn- und Blütenpflanzen der Bundesrepublik Deutschland" and, to a larger extent, in his capacity as 'Regionalstellenleiter Südwest-Niedersachsen' (Director of the Southwest Lower Saxony regional office) to the "Verbreitungsatlas der Farn- und Blütenpflanzen in Niedersachsen und Bremen" (Garve et al. 2007, Naturschutz Landschaftspflege Niedersachsen 43) for which he participated in numerous floristic field mapping meetings.

The high reputation that Heinrich E. Weber enjoys as a scientist is not only reflected in the large number of standard and individual works he has published and the great demand for his scientific work, but also in numerous honours and the efforts of many institutions to recruit him as a reviewer or scientist in an advisory capacity.

Commitment to the protection and sustainable use of nature

A description of Heinrich Weber's life's work would not be complete without a mention of his commitment and services to nature. For him, the dramatic decline of biodiversity in north-west Germany was a particularly serious problem, as he stated when he was awarded the 'Reinhold-Tüxen-Preis'.

As early as 1949 he became a member of the 'Osnabrücker Naturwissenschaftlicher Verein' and was committed to nature conservation issues, a position that did not correspond to the spirit of the times. In January 1976 he was co-founder and board member of the 'Biologische Schutzgemeinschaft Hunte-Weser-Ems' ('Biological Association for the Protection of the Hunte-Weser-Ems region') (BSH). In addition, he was for many years 'Naturschutzbeauftragter der Stadt Osnabrück' (Commissioner for Nature Protection for the City of Osnabrück), president of the 'Osnabrücker Naturwissenschaftlicher Verein' and a member of the board of trustees of the 'Umweltstiftung Weser-Ems' ('Weser-Ems Environmental Foundation'). From the early 1950s maintaining high quality diversity was one of Weber's most important concerns. Nevertheless, today, "... despite all efforts to protect nature, most of the biodiversity of the past has been lost in terms of species and vegetation types which are now extinct." (WEBER 2009, translated from German). In retrospect, however, it is clear that without his efforts and his competent and persistent persuasiveness in voluntary nature conservation, Lower Saxony would be much poorer in regard to the nature reserves which exist today. In 2003 Heinrich E. Weber was honored with the 'Bundesverdienstkreuz am Bande' (Oder of Merit of the Federal Republic of Germany) for this commitment.

Heinrich E. Weber was also always committed to the 'Floristisch-soziologische Arbeitsgemeinschaft'. From the very beginning (since 1984) he was a member of the Editorial Board of Tuexenia and contributed significantly to its success through his own work, the review of manuscripts and valuable advice, especially on nomenclature issues. In addition to the booklets in the Synopsis series (vols. 4-6) already mentioned above, his German version of the nomenclature code in the 'Sonderheft 1' has proved a very welcome aid since 2001. With Heinrich E. Weber, the 'Floristisch-soziologische Arbeitsgemeinschaft' has lost a lovable person, a unique scientist and teacher, who, through the way he wrote and presented his work, was able to inspire students and scientists and convince them of his cause. The 'Arbeitsgemeinschaft' will always remember Heinrich E. Weber with great fondness and gratitude.

The full bibliography of Prof. Weber was published in Tuexenia (https://www.tuexenia.de/publications/tuexenia/Tuexenia_2020_NS_040_0585-0604.pdf).

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From the Mojave Desert to the Sierra Nevada: Michael G. Barbour (1942–2021)

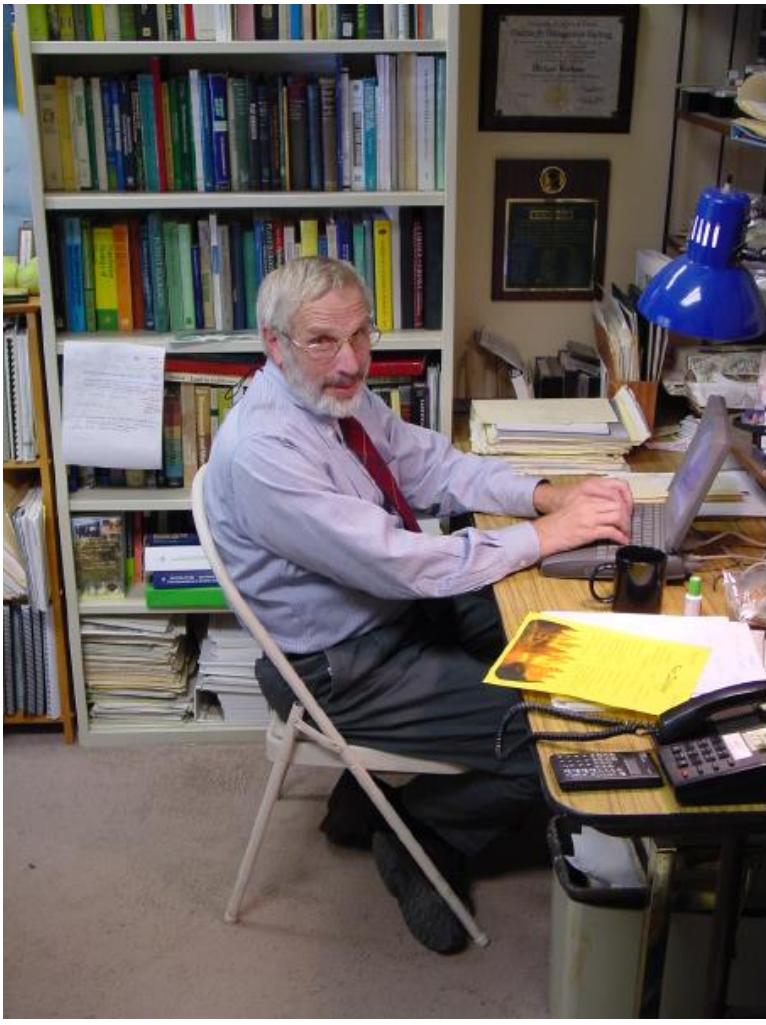
by Marcel Rejmánek

What comes to the mind of a plant ecologist when the name Michael Barbour is mentioned? *Larrea*, *Cakile*, coniferous forests, vernal pools, *Terrestrial Plant Ecology*, *Terrestrial Vegetation of California,* indefatigable field researcher, enthusiastic teacher, irreplaceable friend? All of that and much more crossed our minds when we learned that, after a long fight with Lewy body -Parkinson's disease, Mike died peacefully at his home in Winters, California, on January 7. He is survived by his wife Valerie Whitworth, daughter Julie Barbour, son Alan Barbour, stepson Steven Whitworth, five grandchildren and generations of grateful colleagues and students.

Michael was born to George and Mae Barbour on 24th of February, 1942, in Jackson, Michagan. After graduating with a BS in Botany from Michigan State University in 1963, he went on to obtain his PhD in Botany from Duke University in 1967. The same year, Michael was hired as an assistant professor in the Department of Botany, University of California, Davis (UCD). For the following half century, plant ecology in California has been unimaginable without Professor Michael Barbour.

The variety of his research was extensive. He studied almost all types of ecosystems in the state. After working on population structure and ecophysiology of creosote bush in the Mojave Desert, Michael studied salt tolerance and competiveness of Californian salt marsh plants, vegetation of coastal dunes and beaches along the Pacific coast, demography of endemic plants in the Eureka Valley, vegetation of the Alabama Hills under Mt. Whitney, regeneration of red and white fir in the Sierra Nevada and the northern Coastal Range, old-growth forests of the Lake Tahoe Basin, conifer forests in the San Bernardino Mountains, and vegetation of vernal pools in the Central Valley. His major questions were always "What determines distribution of individual plant species?" and "What is responsible for the uniqueness of particular plant communities?".

Michael's long professional carreer was not focused solely on California. He studied seed banks in four vegetation types in South Australia, morphology and cytology of creosote bush in Argentina, dune and scrub vegetation in Israel, beach vegetation along the Gulf of Mexico, mixed-forests in the Baja California's Sierra San Pedro Martir, age structure of *Quercus pyrenaica* woodlands in Spain, vernal pools in Portugal, and population structure of *Pinus canariensis* stands on the island of Tenerife.



Michael Barbour in his office

While Michael's research contributions are extensive, his teaching and textbooks also have had a far-reaching influence. Michael taught introductory Botany/Plant Biology, often in partnership with others. To assist his

teaching, he co-authored two Botany/Plant Biology textbooks in several editions and one of them, *Botany: An Introduction to Plant Biology*, was for a time the best-selling text on that topic in the US. He also routinely taught an undergraduate course on California plant communities. Students loved this class and all of them still remember field trips that helped them to see Californian nature in a completely new way. The graduate course on Plant Community Ecology, taught with John Menke and Marcel Rejmánek, was definitely more demanding, but students did not complain and handouts provided in this class are still used as reference by many.

Michael was a leading author of three editions of the textbook *Terrestrial Plant Ecology*. For many years, this was the only textbook on the subject that was available. He also co-edited *Terrestrial Vegetation of California*, together with his mentor and colleague Jack Major, and with his former major professor at Duke University, W. Dwight Billings, Michael coedited two editions of *Vegetation of North America*. In the years 1985–1988, Michael served as an editor for *Ecology*/*Ecological Monographs* published by the Ecological Society of America. Browsing through popular books on California's flora and vegetation co-edited by Michael (e.g., *California's Changing Landscapes* or *California's Botanical Landscapes*) will be enjoyed by both lay and professional readers for many years to come.

He served on the IAVS Council for two terms from 2007 to 2015. He was also a long-time member of the North American Section of IAVS and served as Chair of the Section from 2000 to 2003. Mike and Jack Major organized a 1988 IAVS Field Conference focused on California coastal vegetation. Mike was a frequent participant in IAVS meetings and excursions. Many of us met him in 1995 (Huston, USA), 1998 (Uppsala, Sweden), 1999 (Bilbao, Spain), 2002 (Porto Alegre, Brazil), 2004 (Kona, Hawaii), 2005 (Lisbon, Portugal), 2007 (Swansea, Wales), 2008 (Stellenbosch, South Africa), 2009 (Crete, Greece), 2010 (Ensenada, Mexico), 2011 (Lyon, France),

Michael with Valerie in Yosemite, 2009

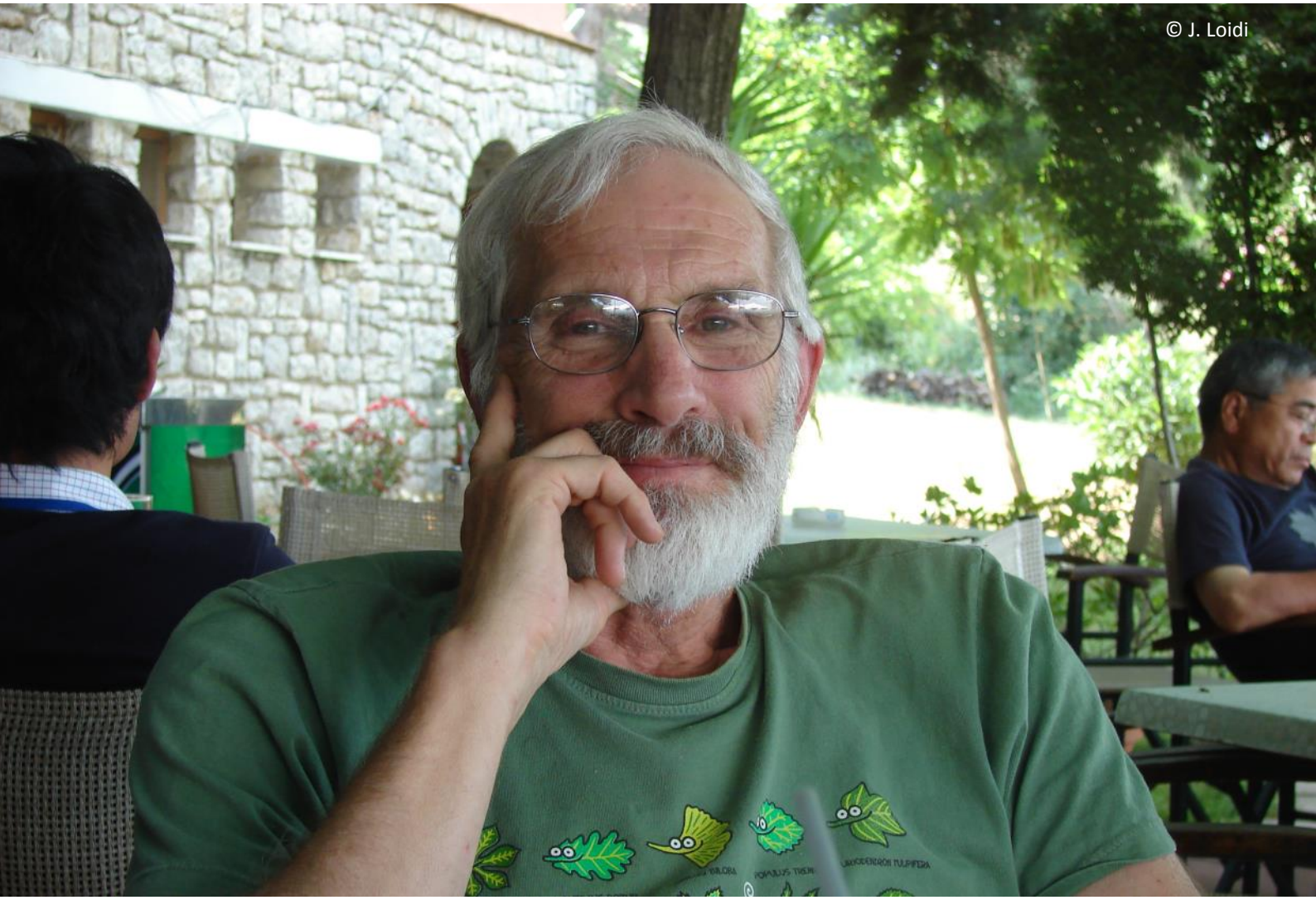
2012 (Mokpo, South Korea), 2013 (Tartu, Estonia), 2015 (Brno, Czech Republic), 2017 (Palermo, Italy), and 2018 (Bozeman, Montana).

I don't remember Michael ever criticizing anybody. Once he told me "I don't like to compare people". This attitude was one of the reasons all of us loved him. He had several "eternal" students who, because of his patience and encouragement, made it to their graduations even after a very long time.

We lost a great mind and a unique friend too soon. Michael's friends and colleagues around the world will sorely miss him, but his achievements and achievements of his students guarantee him a permanent place in the annals of the science of vegetation.

Michael's family has asked that donations in his name could be made to the UC Davis Center for Plant Diversity Herbarium. Gifts can be made online at https://give.ucdavis.edu/AHER/222142 or by mailing a check to the UC Davis Foundation, in memory of Michael Barbour, 202 Cousteau Place, Suite 185, Davis, CA 95618.

Right: Michael during the IAVS excursion in Baja California, 2010.



During the IAVS excursion in Greece, 2009.

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Winter in the Carpathians

Contact IAVS

International Association for Vegetation Science
Business Office
MCI | Benelux
Boulevard du Souverain 280
1160 Brussels - Belgium

www.iavs.org
admin@iavs.org

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