

of the European Dry Grassland Group



This December issue includes the invitation and the detailed information on two main future activities organized by the EDGG: the European Dry Grassland Meeting in Tula (Russia) and the 7th Field Workshop in Spain. Both of them will be held in June 2014 and we hope to meet many of you there. Invitation to EDGM 2015 in Mainz, Germany, and two reports from the conferences organized by the EDGG in September 2013 are also included: the Open Land-scape Conference in Hildesheim, Germany, and the conference on management of xeric grasslands in Crieven, Germany. Additionally, two Forum articles focus on the frequently discussed management of grassland burning and to an ethical model of absolute zapovednost'.

The year 2013 is almost over and we are happy that it has been active and fruitful thanks to many of you who contributed to the events and activities organized by the EDGG. We wish you and your families a peaceful Christmas time and good luck for the coming year 2014.

The Editors

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Pulsatilla pratensis. Photo: Jürgen Dengler

December 2013

EDGG homepage: www.edgg.org

European Dry Grassland Group

The European Dry Grassland Group (EDGG) is a network of specialists for European dry grassland and Palaearctic steppes. EDGG is a Working Group of the International Association for Vegetation Science (IAVS).

The basic aims of the EDGG are:

♠ to compile and to distribute information on research and conservation in dry grasslands beyond national borders;

♠ to stimulate active cooperation among dry grassland scientists (exchanging data, common data standards, joint projects).

To achieve its aims, EDGG provides seven media for the exchange of information between dry grassland researchers and conservationists:

♠ the **Bulletin of the EDGG** (published quarterly);

♠ the **EDGG homepage** (www.edgg.org);

♠ e-mails via our **mailing list** on urgent issues;

♠ the **European Dry Grassland Meetings** - organized annually at different locations throughout Europe;

♠ **EDGG research expeditions and field workshops** to sample baseline data of underrepresented regions of Europe;

♠ EDGG vegetation databases;

♠ **Special Features** on dry grassland-related topics in various peer-reviewed journals.

The EDGG covers all aspects related to dry grasslands, in particular: plants - animals - fungi - microbia - soils - taxonomy - phylogeography - ecophysiology - population biology - species' interactions - vegetation ecology - syntaxonomy - landscape ecology - biodiversity - land use history - agriculture - nature conservation - restoration - environmental legislation - environmental education.

Anyone can join the EDGG without any fee or other obligation. To become a member of the European Dry Grassland Group or its subordinate units, please, send an e-mail to Jürgen Dengler, including your name and complete address, and specify any of the groups you wish to join. More detailed information can be found at: http://www.edgg.org/about_us.htm.

As of 10 December 2013 EDGG had 978 members from 60 countries all over the world.

EDGG Subgroups

EDGG members are automatically assigned to the Regional Subgroup of the region in which they reside. If you additionally wish to join other Subgroups or the new Grassland Conservation and Restoration Subgroup, just send an e-mail to the Membership Administrator (juergen.dengler@uni-bayreuth.de).

Arbeitsgruppe Trockenrasen (Germany) (contact: Thomas Becker - beckerth@uni-trier.de), Ute Jandt - jandt@botanik.uni-halle.de : 239 members

Working Group on Dry Grasslands in the Nordic and Baltic Region (contact: Jürgen Dengler - juergen.dengler@uni-bayreuth.de): 100 members

South-East European Dry Grasslands (SEEDGG) (contact: Iva Apostolova - iva@bio.bas.bg): 254 members

Mediterranean Dry Grasslands (Med-DG) (contact: Michael Vrahnakis - mvrahnak@teilar.gr): 303 members

Topical Subgroup Grassland Conservation and Restoration (contact: Péter Török - molinia@gmail.com): 69 members

EDGG Executive Committee and responsibilities of its members

Jürgen Dengler: Membership Administrator, Coordinator for Special Features, Coordinator for EDGG Expeditions, Book Review Editor, Deputy Contact Officer to other organisations. juergen.dengler@uni-bayreuth.de

Monika Janišová: Editor-in-Chief of the Bulletin of the EDGG, Representative to the IAVS, Deputy Meetings Coordinator. monika.janisova@gmail.com

Solvita Rūsiņa: Editor-in-Chief of the EDGG homepage (incl. other electronic media). rusina@lu.lv

Péter Török: Contact Officer to other organisations, Deputy-Secretary-General, Deputy-Officer of the Special Policy Committee. molinia@gmail.com

Stephen Venn: Secretary-General, Deputy-Editor-in-Chief of the EDGG homepage (incl. other electronic media). stephen.venn@helsinki.fi

Michael Vrahnakis: Meetings Coordinator, Officer of the Special Policy Committee. mvrahnak@teilar.gr

Join the IAVS

We would like to invite those of EDGG members who deal with plants and vegetation to consider joining our mother organisation, the International Association for Vegetation Science (IAVS; see www.iavs.org). Membership has many benefits, including:

- ♠ gain the professional development, recognition and credibility that come with belonging to and participating actively in the primary organization for professional vegetation scientists worldwide;
- ♠ have the opportunity to participate in setting the agenda for vegetation science;
- ♠ quickly discover jobs, scholarship opportunities, conference information, and other opportunities of interest to vegetation scientists, and make announcements to others through the IAVS website, listserv and FaceBook page;
- ♠ meet, interact and network with other vegetation science professionals in numerous ways, such as developing scientific collaborations to obtaining critical advice and insight;
- ♠ be eligible for IAVS awards, including the young scientist awards and travel grants;
- ♠ be eligible for IAVS travel grants for participation in European Dry Grassland Meetings (EDGMs) and EDGG Field Workshops as well as for EDGG Fellowships financed by the IAVS;
- ♠ be eligible for low member rates for subscriptions to the IAVS journals - *Journal of Vegetation Science* and *Applied Vegetation Science*;
- ♠ benefit from significant price reductions for attendance at the annual IAVS Symposium and associated field excursions;
- ♠ receive a 20% discount on all Wiley, Wiley-Blackwell, For Dummies and Frommers books;
- ♠ enjoy seamless web access to all IAVS journals to which you subscribe;
- ♠ access to the *IAVS Bulletin* as a publication outlet;
- ♠ have the opportunity to participate in topical Working Groups, Regional Sections and special committees;
- ♠ gain access to the members-only section of the website, such as the Member Directory.

To join the IAVS, or renew membership, just go to <http://www.iavs.org/MembershipRenew.aspx>. The ordinary membership fees are already rather low (20 € for regular members, 10 € for students), but vegetation scientists from low- to medium-income countries can apply for further reductions or even free membership and free electronic subscription to the IAVS journals *Journal of Vegetation Science* and *Applied Vegetation Science* (see <http://www.iavs.org/AwardsFinancial.aspx>). If you benefit from such reduced/free membership in 2013, please do not forget to apply for renewal for 2014.

EDGG receives project funding from IAVS

In November, the EDGG applied for financial support from the IAVS for two special activities. The Governing Board of the IAVS approved our application about in total 2600 EURO. We started with the implementation of both projects.

1. Improvement of the structure, design and functionality of the EDGG homepage (duration 6 months, 1 800 Euro). This activity is aimed at i) redesigning and updating the homepage structure; ii) creating a new publication index, both in alphabetical order and organized under themes and keywords; iii) creating a database of publications on dry grasslands and related topics; iv) incorporating a conference homepage with registration functionalities into the basic EDGG homepage and v) providing the facility to search the whole web site.

2. Linguistic editing of articles accepted for the EDGG Special Issue of *Hacquetia* 2014 on Dry grasslands in Mediterranean and sub-Mediterranean Europe (duration 4 months, 800 Euro). This activity should enhance quality of the open access and full colour special issue edited by the EDGG (guest editors: Iva Apostolova BG, Jürgen Dengler GE, Romeo Di Petro IT, Rosario Gavilan ES and Ioannis Tsiripidis GR).

Another positive news is the announced decision of the IAVS Governing Board about the financial support for people to attend meetings of IAVS working groups. Although the final decision on the support recipients has to be approved by the Global Sponsorship Committee of the IAVS, it is largely up to the Steering or Executive Committee of the working group to evaluate the applications and to make the priority list. The financial support should go mainly to students from low- and middle-income countries, but in some cases also to non-students (more advanced scientists) as well as people from 'richer' countries can be supported. The only general pre-conditions are that an oral or poster presentation has to be given at the meeting/workshop of the working group, and that the applicant has to be IAVS member. For 2014, the EDGG can spend up to 6 000 Euro for this purpose.

Invitation to IAVS Symposium 2014 in Perth, Australia

Recently, the webpage with the relevant information on the 57th symposium of IAVS has been launched at www.iavs2014.com. The preregistration to the symposium is open. Travel grants will be available for young scientists to allow the attendance of the conference.

Working Group for Phytosociological Nomenclature (GPN)

After more than a decade of being more or less inactive, the formerly informal Phytosociological Nomenclature Commission (PNC) has been dissolved. The Working Group for Phytosociological Nomenclature (GPN) was established within the IAVS to replace it in 2013. The Bylaws of the GPN were approved by the IAVS Council in Tartu and the elections for the GPN Steering Committee are currently being conducted.

The aims of the GPN are to:

- (a) prepare and implement new editions of the International Code of Phytosociological Nomenclature (ICPN);
- (b) engage in the nomenclatural activities that are required by the ICPN;
- (c) register the names of syntaxa;
- (d) register the typifications of names of syntaxa;
- (e) inform and advise the community of vegetation scientists about nomenclatural questions;
- (f) follow methodological developments which have direct or indirect implications for the nomenclature of vegetation types;
- (g) follow the developments of the International Code of Botanical Nomenclature for Algae, Fungi and Plants;
- (h) establish bridges between the different schools of classification of plant communities.

The GPN hopes to provide a service to the vegetation scientist community worldwide that matches their needs. All IAVS members who deal with phytosociology or use phytosociological names, are invited to join the GPN for free, to influence the next edition of the ICPN and the services being developed by the GPN. No in-depth knowledge of the ICPN is required to join the GPN; rather we wish “ordinary” phytosociologists to join, in order to be able to adjust the Code and the GPN tools (e.g. a new online database to be launched) to their needs.

On 15 December, the election for the Steering Committee of the Group for Phytosociological Nomenclature (GPN) closed. The following seven members were elected for the period 2014-2017: Jean-Paul Theurillat (CH), Wolfgang Willner (AT), Laco Mucina (AU), Frederico Fernández-González (ES), Daniela Gigante (IT), Andraz Carni (SI) and Jürgen Dengler (DE). We are happy to announce that nearly all GPN Steering Committee members are also EDGG members.

For further information and to join, please contact the interim spokesperson of the GPN, Jean-Paul Theurillat (jean-paul.theurillat@unige.ch).

Ecoinformatics Working Group

At the IAVS Council Meeting in Tartu, the Bylaws of the Ecoinformatics Working Group were also approved. The objectives of this IAVS Working Group include:

- (a) facilitating communication between scientists studying community ecology through the assimilation and exploration of large databases comprising vegetation-plot and related ecological data;
- (b) enhancing access to these data;
- (c) establishing standards for the exchange of these data, to facilitate data-sharing;
- (d) providing tools for the identification, access, integration, storage and analysis of these data.

Any person interested in these topics, whether an IAVS member or not, is welcome to join. Just contact one of the five members of the newly elected Steering Committee: Susan Wiser (wisers@landcareresearch.co.nz), Stephan Hennekens (stephan.hennekens@wur.nl), Florian Jansen (jansen@uni-greifswald.de), Miquel de Cáceres (miquelcaceres@gmail.com), Peter Minchin (pminchi@siue.edu).

European Vegetation Archive (EVA)

The idea of a comprehensive pan-European vegetation-plot database EVA was already launched at the 21st Workshop of the European Vegetation Survey (EVS; www.euroveg.org) in Vienna, 2012.

EVA (<http://euroveg.org/eva-database>) aims at establishing and maintaining a single data repository of vegetation-plot observations (i.e. records of plant taxon co-occurrence at particular sites, also known as phytosociological relevés) from Europe and adjacent areas. The primary objective of this initiative is to facilitate the use of these data for non-commercial purposes, mainly academic research and applications in nature conservation and ecological restoration.

In Vienna, an agreement was reached among representatives of several of the largest European national and regional vegetation databases. It was proposed to implement EVA in the program TURBOVEG, version 3, by Stephan Hennekens, when the software development has advanced sufficiently. During the 1.5 years since Vienna, Stephan Hennekens, Borja Jiménez-Alfaro and Milan Chytrý, had been working hard on the development of a prototype of TV3 and of a joint European database within the framework of the Braun-Blanquet project (= parameterization of European vegetation types; see <http://euroveg.org/projects>). While the Braun-Blanquet project is presently mainly concerned with forests the research project SIGNAL (<http://www.bayceer.uni-bayreuth.de/signal/>), in cooperation with EDGG and EVS, agreed during summer 2013 on the

establishment of a parallel project for grasslands, entitled the European Grassland Archive (EGA; see Bulletin 19/20: pp. 8–10).

During a recent workshop on EVA, the Braun-Blanquet project, EGA and TV3 in Brno (27 November - 1 December), attended on the behalf of EDGG by Jürgen Dengler and Kiril Vassilev, we concluded that the software and the experience on data integration gained from the Braun-Blanquet project are now ripe for the launch of EVA, the European Vegetation Archive. We will therefore unite those data contributed by the EVA funding members with those from contributors to the Braun-Blanquet project, as well as promised contributions to the EGA (provided the latter two agree with this step), into one joint database, which will be called EVA. The European Grassland Archive (EGA) will become an integral part of EVA, run under the EVA Data Property and Governance Rules (see <http://euroveg.org/download/eva-rules.pdf>). The analyses of diversity patterns (species density, neophytes, functional groups) in European grasslands, planned by EGA-SIGNAL, will be treated as a project within EVA, based on the specific EGA rules published in the last Bulletin.

Overall, EVA will be administered by a Coordinating Board (Milan Chytrý, Jürgen Dengler, Stephan Hennekens, Florian Jansen, Flavia Landucci, Joop Schaminée), supported by a number of database managers (Borja Jiménez-Alfaro, Ilona Knollová, Stephan Hennekens), the EVA Coordinator for SE Europe (Kiril Vassilev) and a Taxonomic Advisory Board. Within the Coordinating Board, Jürgen Dengler will coordinate the activities for grassland datasets.

During the coming weeks and months, EVA will gradually invite the major European vegetation-plot databases to join and contribute data in accordance with one of the three data access regimes (open access, semi-open access or restricted access. This assignment can be applied to complete databases or plot-wise). EVA preferably will include comprehensive national and supranational databases (with no or little overlap with other such databases) and accept smaller regional databases only from otherwise underrepresented regions.

The contributed databases will be integrated and standardized in EVA using the prototype version of TV3 (the software is not yet publically available!) for pan-European analyses. Depending on the access rules determined by the data providers, plot data can be requested by researchers for specific research projects, where data with restricted and semi-restricted access are only available for persons who contributed data to EVA themselves (EVA Consortium members). Data requests, data provision and co-authorship rules for data providers for subsequent publications will be governed by the EVA Data Property and Governance Rules (see above), which will protect the rights of the data providers. Presently, nine papers for international journals are in preparation, with the option for those database custodians who contribute their data in time to become co-authors.

If you have a grassland database that you wish to contribute to EVA, feel encouraged to contact Jürgen Dengler (juergen.dengler@uni-bayreuth.de) to discuss the possibilities.

EDGG-edited Special Features/ Special Issues

(1) Special Issue of Agriculture, Ecosystems and Environment

This Special Issue on “Biodiversity of Palaearctic grasslands: patterns, processes and conservation” is now completed. A total of 14 research articles, plus one synthesising editorial, have been compiled by the guest editor team (Jürgen Dengler, Monika Janišová, Péter Török and Camilla Wellstein) and will appear in print during early 2014 (if you are interested in the articles already now, please contact the corresponding authors directly):

Synthesis

Dengler, J., Janišová, M., Török, P., Wellstein, C. (2014): Biodiversity of Palaearctic grasslands: a synthesis. *Agriculture, Ecosystems and Environment* (in press) [contact: juergen.dengler@uni-bayreuth.de]

Multi-taxon studies

Turtureanu, P.D., Palpurina, S., Becker, T., Dolnik, C., Ruprecht, E., Sutcliffe, L.M.E., Szabó, A., Dengler, J. (2014): Scale- and taxon-dependent biodiversity patterns of dry grassland vegetation in Transylvania (Romania). *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.10.028. [contact: juergen.dengler@uni-bayreuth.de]

Zulka, K.P., Abensperg-Traun, M., Milasowszky, N., Bieringer, G., Gereben-Krenn, B.-A., Holzinger, W., Hölzler, G., Rabitsch, W., Reischütz, A., Querner, P., Sauberer, N., Schmitzberger, I., Willner, W., Wrbka, T., Zechmeister, H. (2014): Species richness in dry grassland patches in eastern Austria: a multi-taxon study on the role of local, landscape and habitat quality variables. *Agriculture, Ecosystems and Environment*. (in press) [contact: klaus.peter.zulka@univie.ac.at]

Species richness patterns along various gradients

Ambarlı, D., Bilgin, C.C. (2014): Effects of landscape, land use and vegetation on bird community composition and diversity in Inner Anatolian steppes. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.11.006 [contact: didemcakar@gmail.com]

Janišová, M., Michalcová, D., Bacaro, G., Ghisla, A. (2014): Landscape effects on diversity of semi-natural grasslands. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.05.022. [contact: monika.janisova@gmail.com]

Reitalu, T., Helm, A., Pärtel, M., Bengtsson, K., Gerhold, P., Rosén, E., Takkis, K., Znamenskiy, S., Prentice, H.C. (2014): Determinants of fine-scale plant diversity in dry calcareous grasslands within the Baltic Sea region. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2012.11.005. [contact: triin.reitalu@mail.ee]

Wanner, A., Suchrow, S., Kiehl, K., Meyer, W., Pohlmann, N., Stock, M., Jensen, K. (2014): Scale matters: Impact of management on plant species richness and vegetation type diversity in Wadden Sea salt marshes. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.08.014. [contact: antonia.wanner@botanik.uni-hamburg.de]

Diversity of seed banks related to aboveground vegetation

Valkó, O., Tóthmérész, B., Kelemen, A., Simon, E., Migléc, T., Lukács, B.A., Török, P. (2014): Environmental factors driving seed bank diversity in alkali grasslands. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.06.012. [contact: molinia@gmail.com]

Zeiter, M., Preuschkas, J., Stampfli, A. (2014): Seed availability in hay meadows: Land-use intensification promotes seed rain but not the persistent seed bank. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.03.009. [contact: michaela.zeiter@ips.unibe.ch]

Functional diversity

Carboni, M., de Bello, F., Janeček, Š., Doležal, J., Horník J., Lepš, J., Reitalu, T., Klimešová, J. (2014): Changes in trait divergence and convergence along a productivity gradient in wet meadows. *Agriculture, Ecosystems and Environment* (in press) [contact: mcarboni@uniroma3.it]

Niu, K., Choler, P., de Bello, F., Mirotchnick, N., Du, G., Sun, S. (2014): Fertilization decreases species diversity but increases functional diversity: A three-year experiment in a Tibetan alpine meadow. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.07.015. [contact: kechangniu@nju.edu.cn]

Wellstein, C., Campetella, G., Spada, F., Chelli, S., Mucina, L., Canullo, R., Bartha, S. (2014): Context-dependent assembly rules and the role of dominating grasses in semi-natural abandoned sub-mediterranean grasslands. *Agriculture, Ecosystems and Environment* (in press) [contact: camilla.wellstein@unibz.it]

Conservation, management and restoration of grassland diversity

Babai, D., Molnár, Z. (2014): Small-scale traditional management of highly species-rich grasslands in the Carpathians. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.08.018. [contact: babai.daniel@gmail.com]

Prach, K., Jongepierová, I., Řehouňková, K., Fajmon, K. (2014): Restoration of grasslands on ex-arable land using regional and commercial seed mixtures and spontaneous succession: Successional trajectories and changes in species richness. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.06.003. [contact: prach@prf.jcu.cz]

Rédei, T., Sztár, K., Czúcz, B., Barabás, S., Lellei-Kovács, E., Pándi, I., Somay, L., Csekerits, A.

(2014): Weak evidence of long-term extinction debt in Pannonian dry sand grasslands. *Agriculture, Ecosystems and Environment* DOI: 10.1016/j.agee.2013.07.016.

[contact: redeti.tamas@okologia.mta.hu]

(2) Virtual Special Feature of Applied Vegetation Science

The VSF on Classification of European grasslands is also making progress, albeit more slowly than originally planned, because the compilation and analysis of such large-scale datasets is evidently a demanding task. Recently the third research article has been accepted and is in press now:

Urban Šilc, Svetlana Ačič, Zeljko Škvorc, Daniel Krstonosič, Jožo Franjiž & Zora Dajič Stevanovič: Grassland vegetation of the Molinio-Arrhenatheretea class in the NW Balkan Peninsula. *Applied Vegetation Science*.

[contact: urban@zrc-sazu.si]

(3) Current Special Issue of Hacquetia

The Special Issue of Hacquetia on Mediterranean and sub-Mediterranean dry grasslands (eds. Jürgen Dengler, Iva Apostolova, Romeo Di Pietro, Rosario Gavilan & Ioannis Tsiripidis) is proceeding well, though the publication had to be postponed from the second issue of the year 2013 to the first issue of 2014. Thanks to project funding from the IAVS, we can ensure good quality of the English in all articles. Meanwhile two more contributions have now been accepted, and several more are close to that point:

Evangelou, C., Yiakoulaki, M., Papanastasis, V. (2014): Spatio-temporal analysis of sheep and goats grazing in different forage resources of northern Greece. *Hacquetia* (in press)

[contact: katydata@for.auth.gr]

Pirini, B.C., Tsiripidis, I., Bergmeier, E. (2014): Steppe-like grassland vegetation in the hills around the lakes of Vegoritida and Petron, North-Central Greece. *Hacquetia* (in press)

[contact: chpirini@bio.auth.gr]

(4) Future Special Issue of Hacquetia

A second EDGG Special Issue in Hacquetia is in preparation for 2015/I, in conjunction with the European Dry Grassland Meeting 2013 and the two other conferences co-organised by EDGG this year (see reports in this Bulletin). The topic is “Europe’s open, semi-natural habitats: conservation value, management and restoration”. Presently, the team of guest editors (Jürgen Dengler, Marta Carboni, Jasmin Mantilla-Contreras, Péter Török, Stephen Venn, Mihai Zmihorski) is evaluating the abstracts of 21 proposed contributions and will soon inform the authors whether their full articles will be invited.

(5) Future Special Feature in Tuexenia

The 2014 Dry Grassland Special Feature in Tuexenia will be edited by Thomas Becker, Steffen Boch, Monika Janišová, Eszter Ruprecht and Triin Reitalu. A total of eight articles from throughout the Palaearctic biogeographic realm have been invited for submission.

By the way: Tuexenia will receive its first impact factor for 2013 (to be published in June 2014). It is based on the citations the Tuexenia articles of the year 2011 and 2012 receive in any ISI journal during the year 2013 (including Tuexenia itself). The calculated impact factor already now would be 0.81, but given the fact that the year 2013 is not finished yet and ISI is lagging behind with uploading the content of journals by about two months, this preliminary value is likely to increase. The vast majority of citations thus far have been generated by articles in the EDGG Special Features of the years 2011 and 2012. Therefore, we recommend that you continue reading and citing the interesting articles in the Tuexenia Dry Grassland Special Features, which are freely available both on the EDGG homepage (http://www.edgg.org/edgg_publications.htm) and the journal homepage (http://www.tuexenia.de/index.php?id=14&no_cache=1).

(6) Planned Special Issue on Palaearctic steppes

So far, the natural steppes of the Palaearctic biogeographic realm have only been marginally represented in the Special Issues/Special Features published by the EDGG. However, the natural steppes of East Europe, West Asia, Central Asia and Northern Africa, are far less well documented in the international literature, while they are partly even more threatened than the semi-natural grasslands in the forest biomes of Europe. Therefore, we take the opportunity of the first European Dry Grassland Meeting conducted in a venue located in the steppe biome to prepare a Special Issue in a high-rank international journal, exclusively devoted to the natural steppes of the steppe and forest-steppe biomes of Eurasia and North Africa. Our preferred target journals are either Biodiversity & Conservation or Agriculture, Ecosystems and Environment. The working title is Palaearctic steppes: natural history, biodiversity, threat and conservation. We aim at getting the best and most up-to-date studies on the vegetation, fauna and conservation of natural Palaearctic steppes between Morocco in the West and China and Mongolia in the east into this volume. So far the team of confirmed guest editors consists of Jürgen Dengler, Bayreuth, Germany; Didem Ambarli, Ankara, Turkey; Nikolai Ermakov, Novosibirsk, Russia; Johannes Kamp, Münster, Germany; Péter Török, Debrecén, Hungary; and Karsten Wesche, Görlitz, Germany and Mihał Zmihorski, Warsaw, Poland. Since all four are botanists (albeit with some zoological knowledge), we are still seeking 2–3 competent zoologists to join the team. Criteria are publication experience in good international journals, field knowledge in Palaearctic steppes, competence in multiple zoological taxa and membership of the EDGG. If you have suggestions (including self-nominations), please contact the chair of the guest editors, Jürgen Dengler (juergen.dengler@uni-bayreuth.de).

Most likely we will have financial support to provide linguistic editing to contributors who are not sufficiently proficient in English. Contributions from our conference in Tula, as well as from all EDGG members, will be welcome. Precise information will be published in the Bulletin of June 2014.

(7) Other Special Features in connection with our conference in Tula

It is already agreed with the Floristisch-Soziologische Arbeitsgemeinschaft e.V. (FlorSoz) that we will again produce a Dry Grassland Special Feature in Tuexenia 2015 (guest editors: NN), and pending on the demand we might also organise one in Hacquetia 2016/I.

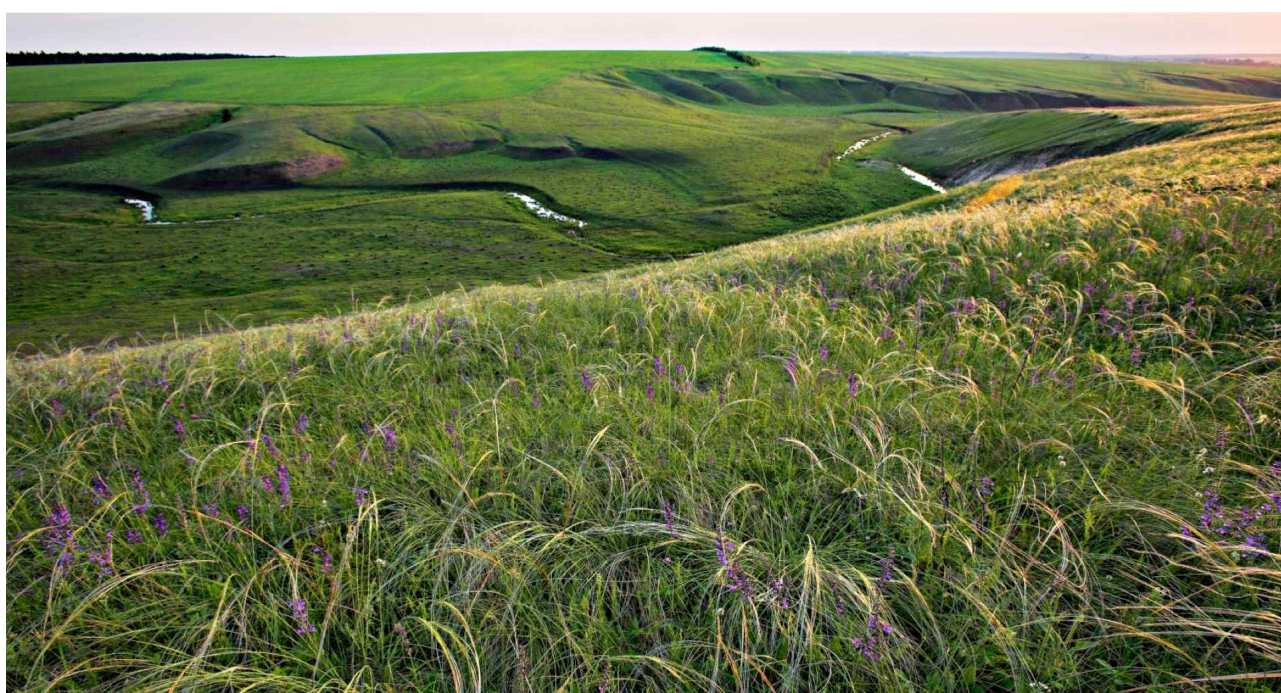


Winter beauty of dry grasslands. Photo: M. Janišová

The 11th European Dry Grassland Meeting

Steppes and Semi-natural Dry Grasslands: Ecology, Transformation and Restoration

Second Circular



http://www.edgg.org/edgg_meeting_2014.html

Main topic of the meeting:

Steppes and Semi-natural Dry Grasslands: Ecology, Transformation and Restoration

Subtopics:

1. Steppes and Dry Grasslands: Diversity and Succession
2. Ecology and Management of Steppes and Dry Grasslands
3. Restoration of Steppes and Dry Grasslands and Rural Societies

The title of the conference was slightly modified to clarify that participants from the whole Palaearctic biogeographic realm are welcome, i.e. those dealing with steppes, from Morocco to China and Mongolia (including Central and Western Asia, East Europe, Siberia, Northern Africa).

Time schedule

June 5 – arrival to Moscow, transfer to Tula and Kulikovo Field, accommodation in Hotel of Kulikovo Field Scientific Centre

Conference part:

6 – 9 June – presentations and field excursions on Kulikovo Field (Tula region)

Post-conference tour:

10-11 June – Kursk region, visit to Central Black Earth Reserve.

12-14 June – Rostov region (village Veshenskaya), visit to the M.Sholokhov Museum-Reserve, excursions to chalk and sandy sites

June 15 – transfer to Tula (Kulikovo Field)

June 16 – transfer to Moscow

Registration and deadlines

To participate in EDGM 12, you will have to register via the conference homepage

http://www.edgg.org/edgg_meeting_2014.html **until 31 January 2014!** (The venue allows only for 70 participants and places will be assigned based on the first-come-first-serve principle)

Deadline for Abstracts is 28 February 2014 (but 31 January 2014 if you apply for travel grants!)

Foreign participants from most countries will need a visa. You can get a tourist or business visa. To obtain a business visa, you need an invitation letter (for the purpose of which we will need some information from you). After registration, please send a photocopy of your passport (the page with your photo, name and date of birth) and personal information (name and address of your organisation, your position; index and address of residence; place (city) where visa was granted) to Olga Burova (burova@kulpole.tula.net). We recommend that you visit the website of the Russian Embassy in your country to find out the precise visa requirements. It is also possible to obtain a tourist visa.

Fees

The conference fee: 120 euro/person.

Preliminary post-conference fee: 300 euro/person (10 days, buses, excursions, lunches). During the post-conference tour, hotel accommodation and meals are at the participants' own expense.

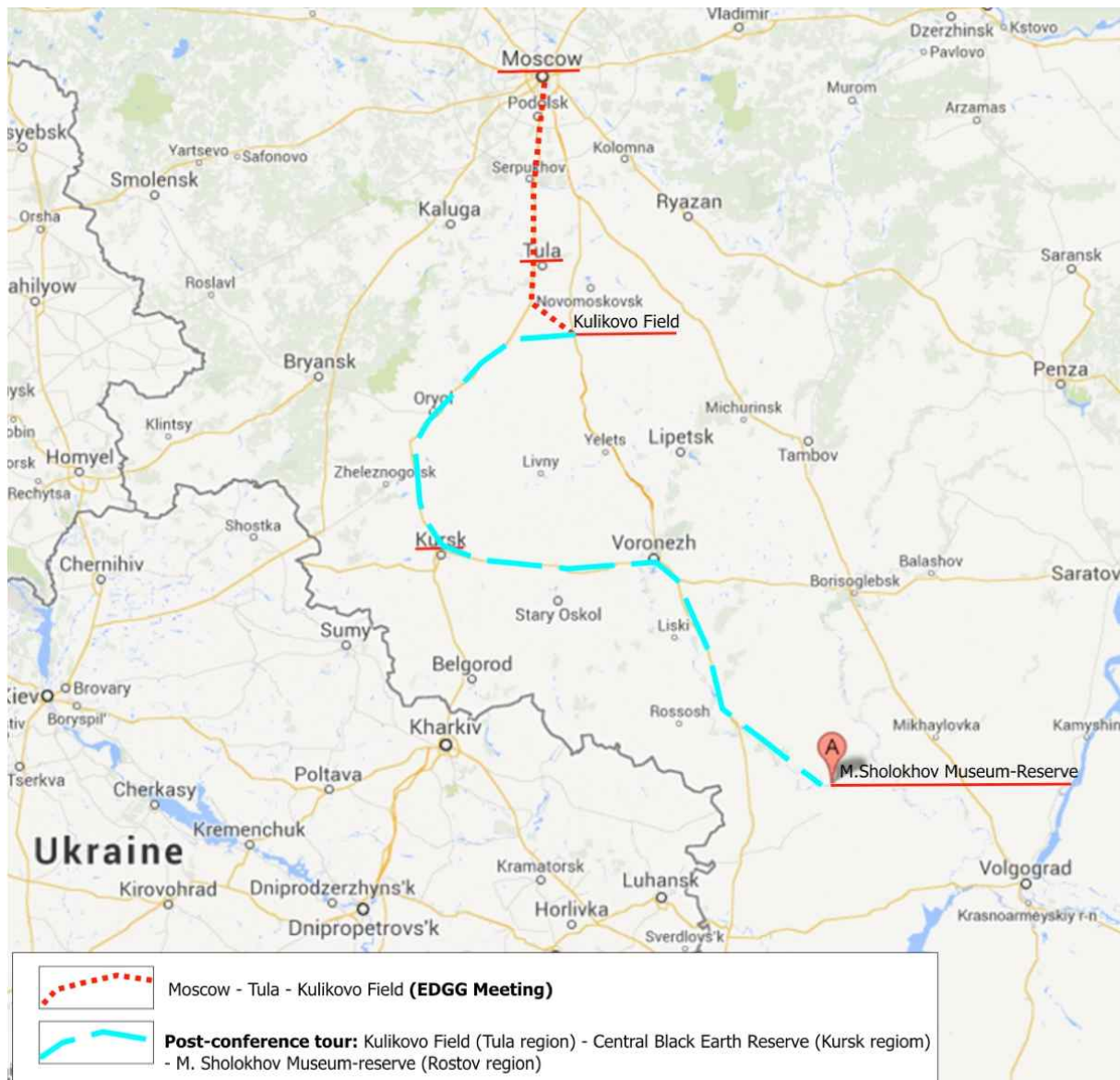
All fees should be paid at the registration desk on the first day.

The precise cost will depend on the exchange rate of the euro/ruble.

Travel grants

Thanks to one co-organizer (UNDP/GEF project "Improving the Coverage and Management Efficiency of Protected Areas in the Steppe Biome of Russia" and one supporter (IAVS), we can offer a **limited number of travel grants** to attend the EDGM (partial or full coverage of travel costs and conference fee). For application, an active participation in the workshop with an oral presentation or poster is required and prevalence will be given to young scientists with financial constraints (i.e. low income and/or particularly high costs to get to Tula).

If you wish to apply for financial support, you first need to register yourself and the abstract of your contribution in the online form, then you can provide the necessary information for travel grant application. Applicants for the UNDP/GEF travel grants must live in Russia and preferably should report on studies supported by this project. Applicants for IAVS travel grants must be IAVS members (membership can be obtained at low rates and in many cases even for free at <http://www.iavs.org/MembershipRenew.aspx>, <http://www.iavs.org/AwardsFinancial.aspx>). In both cases applications will only be considered when the criteria are met and the required information is provided completely. After registration deadline the UNDP/GEF and the EDGM/IAVS will make a selection among the applicants and inform you during February 2014 whether and how much financial support you will receive.



Accommodation

During the conference, accommodation and meals will be provided at the Hotel of *Kulikovo Field Scientific Centre* (Monastyrshino village, Tula region). You can choose your accommodation from the following list:

Hotel “Kulikovo Field Scientific Centre”

<i>Rooms</i>	<i>Number of rooms</i>	<i>Price for room</i>
apartment for 2 persons (with kitchen)	2	57€
apartment for 2 persons (without kitchen)	2	45€
single room	2	23€
double room	8	27€
triple room	3	45€
quadruple room	2	50€

“Scientists’ House”

double room	5	27€
single room (with conveniences but low comfort)	3	12€

Guest House of “Museum of Russian Merchants’ Life” in Epifan

apartment for 2 persons	2	57€
double room (double bed)	1	57€
double room	2	27€

Tent campplace in a tent (without conveniences) 10 5€ for place

Accommodation during the post-conference excursions:

Hotel “Kursk”– Kursk region, two nights (<http://kursk-hotel.ru/>). Preliminary costs: 45 euro (with breakfast and dinner) per day.

Sanatorium “Veshenskiy” – Rostov region, three nights (<http://sankurort.ru/sanatorii/item/569-Veshenskij.html>). Preliminary costs: 35 euro per day.

Conference publications

All participants will receive a Book of Abstracts which will also be published online via the EDGG homepage.

As in previous years, there will be Special Features/Special Issues (SFs/SIs) with selected contributions from the conference in international, peer-reviewed journals, guest-edited by EDGG members.

For the first time, we will have a complete Special Issue exclusively devoted to the natural Palearctic steppes (and forest steppes) with the tentative title **Palaeartic steppes: natural history, biodiversity, threats and conservation** and to be published in a leading international journal such as *Biodiversity & Conservation* or *Agriculture, Ecosystems and Environment*. The Special Issue will be edited by the team of guest editors:

* Dr. habil. Jürgen Dengler, Bayreuth & Leipzig, Germany

* Dr. Didem Ambarli, Ankara, Turkey

- * Dr. Nikolai Ermakov, Novosibirsk, Russia
- * Dr. Johannes Kamp, Münster, Germany
- * Dr. habil. Péter Török, Debrecen, Hungary
- * Dr. habil. Karsten Wesche, Görlitz, Germany
- * Dr. Mihal Zmihorski, Warsaw, Poland

With the prospect of such an excellent publication outlet, we hope to attract the leading steppe researchers from Ukraine, Russia, Kazakstan, Mongolia, China, Iran, Turkey and the smaller countries located in the Palaearctic steppe biome to attend the conference in Tula.

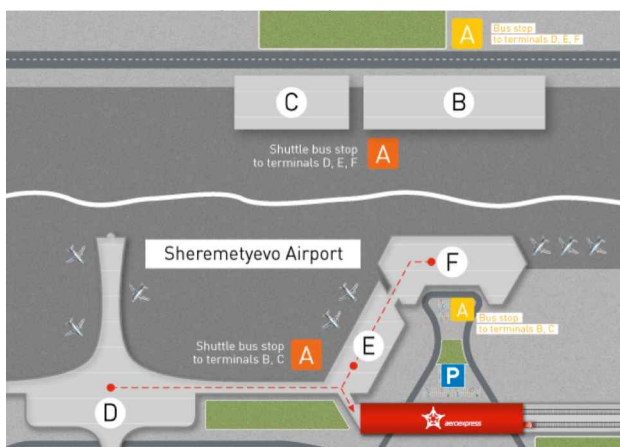
A second SF in Tuexenia (http://www.tuexenia.de/index.php?id=14&no_cache=1) will focus on the semi-natural dry grasslands of Europe (with Dr. Thomas Becker, Trier, Germany as chair of the guest editors), and potentially a third SF will be published in Hacquetia (<http://www.degruyter.com/view/j/hacq>). All options together give the participants and EDGG members plenty of opportunities for publication in an attractive environment that ensures high citation rates.

Travel from Moscow to Tula

If you plan to fly to Moscow by airplane, you will arrive at one of the international airports – Sheremetyevo, Vnukovo or Domodedovo. After you receive your baggage, make sure to exchange Euros for rubles (ruble is the only currency that is accepted in Russia). We are planning to arrange to collect you from Moscow, but if you travel by yourself this is how you can get to Tula:

Follow the sign “Aeroexpress” in order to get from the Sheremetyevo airport to Moscow. Aeroexpress is a very comfortable high-speed train that goes from the Sheremetyevo airport to the Belorussky railway station in Moscow every thirty (30) minutes. The Aeroexpress Terminal is connected with the South AirRail Complex Terminals (D, E, and F) by pedestrian passages. You will have to follow the signs. Aeroexpress passengers can travel to the North AirRail Complex Terminals (B and C) by shuttle buses and public transport. It takes about 20 minutes. There are Aeroexpress ticket vending machines at the Terminal. The machines dispense change and accept bank card payments. You can also buy a ticket from the ticket window, or via the Internet (<http://www.aeroexpress.ru/en/sheremetyevo/scheme.html>).

The journey on the Aeroexpress train from Moscow to Belorussky Rail Terminal takes 35 minutes. The ticket costs 350 rubles (8 Euros).



If you have any difficulties when buying tickets, you should go to the information center (picture right).

The journey on the Aeroexpress train from Moscow to Belorussky Rail Terminal takes 35 minutes. The trains run every 30 minutes.

After arriving at the Belorussky railway station, walk across the square before the railway station, and go down to the subway. The ticket costs 26 rubles (0.6 Euros). You can take either the Circular line (marked in brown color on the subway map), or the line that is marked in green color, from the Belorusskaya station.

Your destination point is the station called Ul. Akademika Yangelya. If you take the circular line, you will have to go to Dobrininskaya station, and then take the pedestrian passage to Serpukhovskaya station (the grey line), and travel to the terminal station on that line. If you take the green line, you will have to go to Tverskaya station and then take the pedestrian passage to Chekhovskaya station. After that, you will have to take the train to the terminal station on that line, which is Ul. Akademika Yangelya. The route from the Belorusskaya station to the station Ul. Akademika Yangelya is marked in red on the map.

If you land at Vnukovo, you will have to take the Aeroexpress to Kievsky railway station. The Kievsky railway station is located at the Kievskaya subway station. This station is marked with a green arrow on the map. You have to take the circular line to Dobrininskaya station, take the pedestrian passage to Serpukhovskaya station, and take the train to Ul. Akademika Yangelya station.



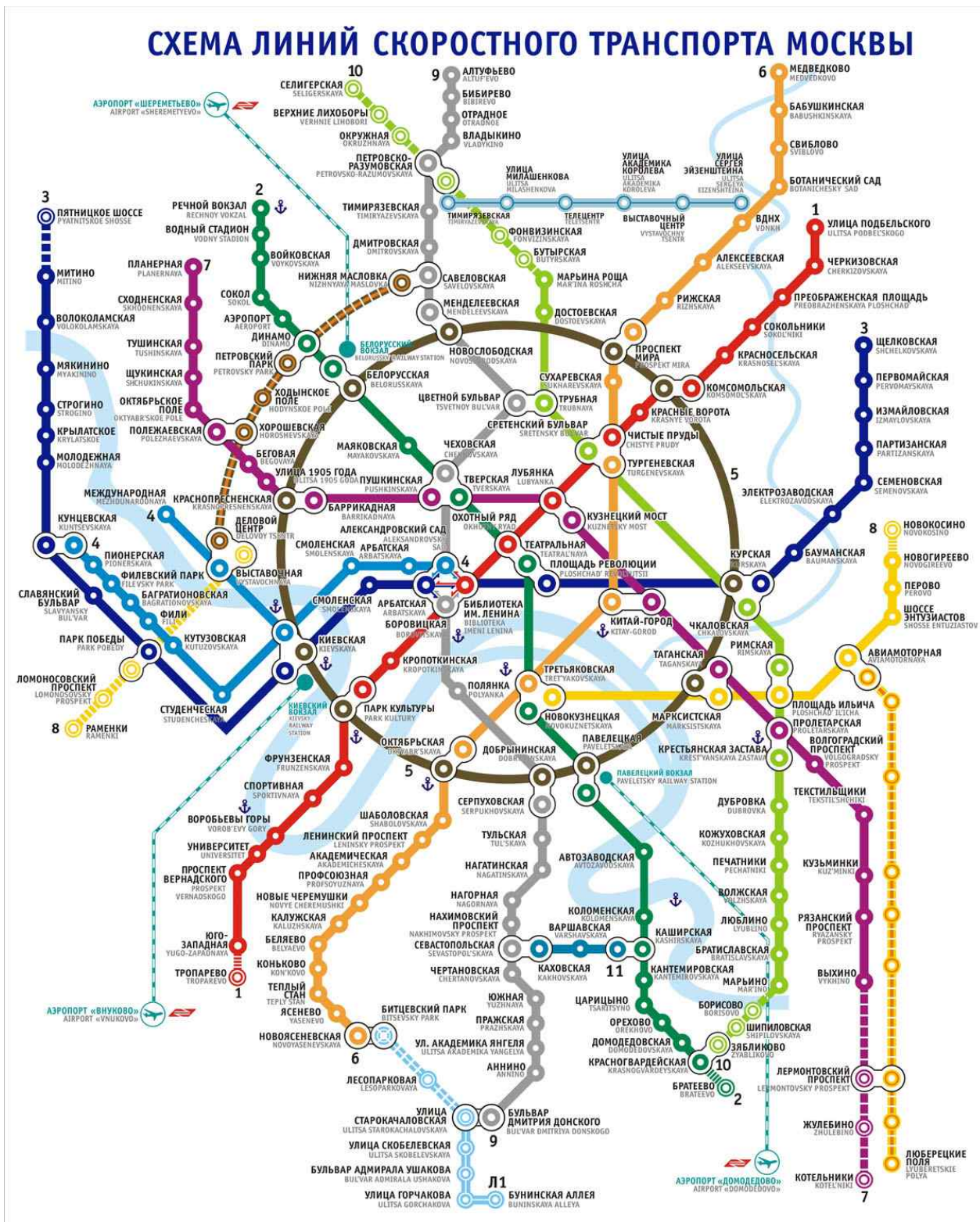
If you land at Domodedovo, take the Aeroexpress to the Paveletsky railway station (that is Paveletskaya station, marked with a yellow arrow on the map). Take the train to Dobrininskaya station, then take the pedestrian passage to Serpukhovskaya station (the grey line), and take the train to the terminal station on that line, which is Ul. Akademika Yangelya.

If you arrive in Moscow by other means of transportation, such as a train or a bus, you will also have to take the subway to Ul. Akademika Yangelya station.

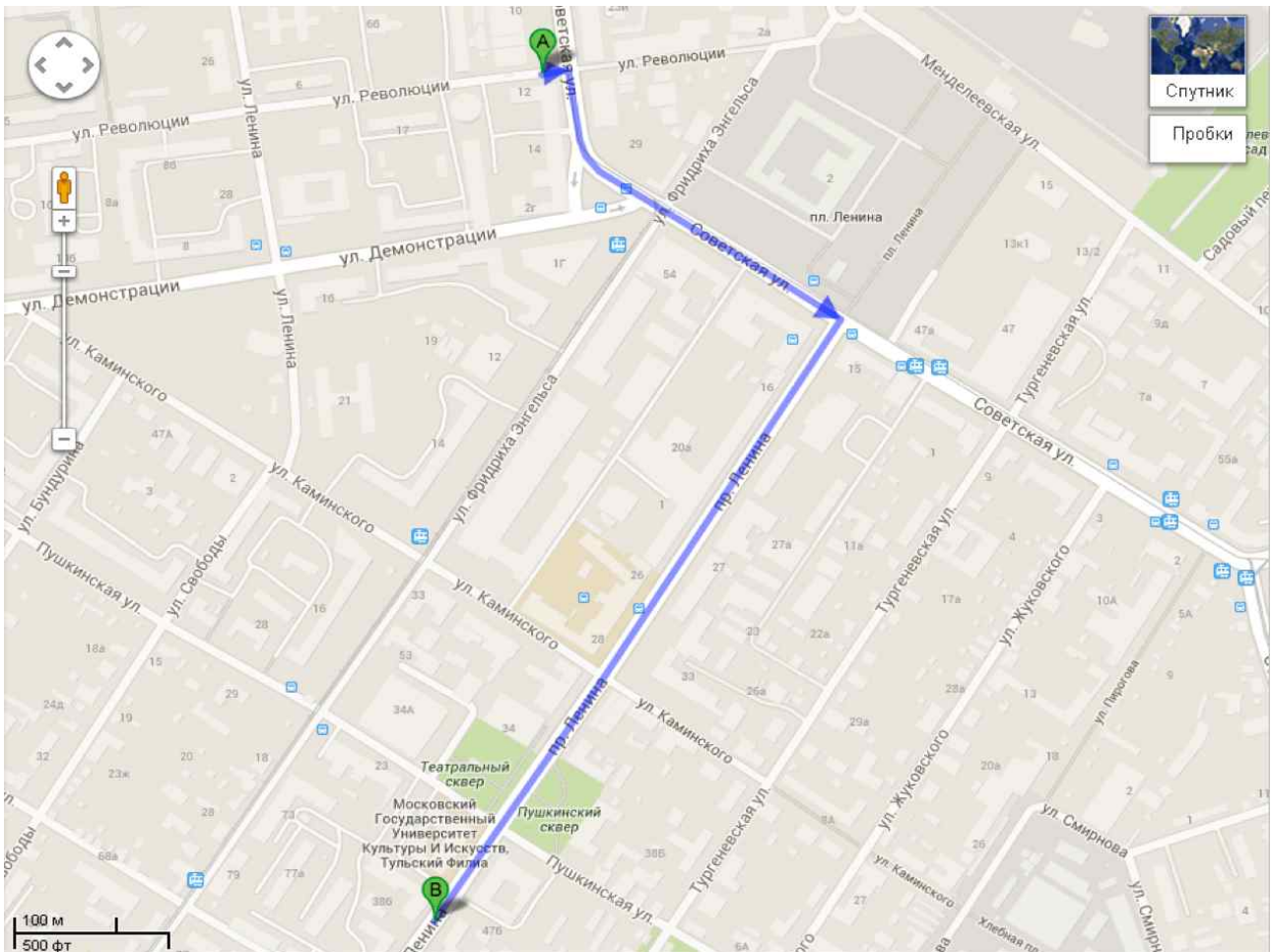
There are four exits from the Ul. Akademika Yangelya subway station. You will have to take the ones that are located closer to the last car of your train. After you leave the subway, you will see mini-buses with the sign that says “Tula” (in Russian Тула). The ticket to Tula costs about 400

rubles (9 Euros). The ride to Tula takes about 2 - 2.5 hours. In Tula, you will have to get off at the terminal stop, which is Ploshchad' Vosstaniya. To get to the Museum-reserve Kulikovo Pole ("Tula Antiquities" complex), you can take any public transportation and ride two stops, or walk for about 10 or 15 minutes.

If you have any questions concerning this travel information, please feel free to contact Elena Volkova (convallaria@mail.ru), cell phone 7-8—910-941-56-21.



The scheme of metro stations in Moscow



The way from bus station to museum “Kulikovo Field” (Tula)

Organizers

European Dry Grassland Group (EDGG) (www.edgg.org) was established in August 2008. It is as an official working group of the International Association for Vegetation Science (IAVS, www.iavs.org). Its aims are to compile and distribute information on research and conservation in dry grasslands beyond national borders, and to stimulate active cooperation among dry grassland scientists, NGO's and all who work with or are interested in dry grasslands.

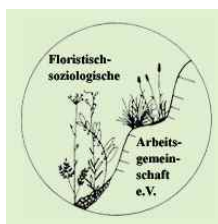
The State Museum of Military History and Natural Reserve “The Kulikovo Field” (<http://www.kulpole.ru/en/>). The Museum was established in 1996 as a museum of the Kulikovo battle of 1380. The main scientific goal is restoring forest and steppe vegetation of the 14th century at the battle site.

UNDP/GEF/MNRE RF project “Improving the Coverage and Management Efficiency of Protected Areas in the Steppe Biome of Russia” (2010-2015; <http://savesteppe.org/project/en>), is the first large international project in Russia aimed specifically at conservation of Russia’s steppe biological diversity. The project is funded by the Global Environment Facility (GEF); initiated, designed and implemented via the UNDP Office in the Russian Federation with the Ministry of Natural Resources and Ecology of the Russian Federation (MNER) acting as a national implementing agency. The main objective of the project is to develop the capacity and ecologically based enabling tools and mechanisms for the consolidation, expansion and disturbance based integrated management of a system of protected natural areas at the landscape level within the steppe biome of Russia.

Supporting organisations and institutions



International Association for Vegetation Science (IAVS) (www.iavs.org) its original precursor was the International Phytosociological Society (IPS) which was founded in 1939. IAVS is a worldwide union of scientists and others interested in theoretical and practical studies of all aspects of vegetation. The main goals of the IAVS are to facilitate personal contacts among vegetation scientists all over the world and to promote research in all aspects of vegetation science and its applications. As the mother organisation of EDGG, IAVS supports the EDGM in Tula, among others, with the provision of travel grants.



Floristisch-soziologische Arbeitsgemeinschaft (FlorSoz) (<http://www.tuexenia.de/>) is a German-speaking association of specialists and enthusiasts interested in the floristic structure of spontaneous vegetation, phytosociology and vegetation ecology. The association is a non-profit organization and will be pleased to welcome anyone who is interested.



Society for Ecological Restoration Europe (SER Europe) (<http://www.ser.org/>) is a network of restoration experts, exchanging knowledge and expertise for the promotion of ecological restoration in Europe. Our network is open to Scientists, Practitioners, Policy makers and other restoration enthusiasts. Join us to help restore Europe's ecosystems and the many services they provide to society! Info: www.ser.org/europe; info@ser-europe.org



Institute of Geography Russian Academy of Science (<http://www.igras.ru/>) is the oldest (founded in 1918) and largest Russian academic research center. The main scientific topics are the evolution of the natural environment and resources; geographical problems of land use and nature conservation; interactions between environment and society, particularly in terms of increasing anthropogenic pressure and regional frameworks for sustainable development of environment and society.



The Central Black Earth State Reserve of Professor V.V. Alekhine (<http://zapoved-kursk.ru/>). Established in 1935, the Reserve has belonged to the global network of UNESCO biosphere reserves since 1979, and it is the holder of the Diploma of the Council of Europe since 1998. In 2012, it entered the Emerald Network in Europe. Major functions are: saving the forest-steppe landscape in Kursk region, studying and monitoring of biodiversity and ecological education.



The State M. Sholokhov Museum-Reserve (<http://eng.sholokhov.ru>). The Museum was established in 1984 as a homeland of Mikhail Sholokhov (Rostov region), a great Russian writer. Now the Museum is a center of conservation of both cultural and natural heritage.



Institute of Arid zones of the Southern Scientific Center of the Russian Academy of Sciences (<http://www.ssc-ras.ru/eng/>). The SSC RAS is a system of scientific institutions, integrated multi-divisional branches and specialized laboratories. The Institute of Arid Zones was founded in 2008 for studying marine fresh-water and terrestrial ecosystems of the South of European Russia.



Southern Federal University is a modern research university with emphasis on innovations and entrepreneurship. In its academic activities it combines studies with fundamental and applied science, as well as cutting-edge technologies and innovative approaches. Info: http://sfedu.ru/international/?page_id=8. Is a major research center for the study of the steppe vegetation.



Tula State University (<http://tsu.tula.ru/>). Natural-Science Faculty is a major scientific center for studying the vegetation, fauna and ecology of Tula region.



John Wiley & Sons, Inc. (<http://eu.wiley.com/WileyCDA/>) was founded in 1807 and is a global science publisher, particularly active in the field of ecology and conservation biology. Among others, Wiley is the publishing partner of the EDGG mother organisation IAVS and provides the Young Investigator Prizes to the EDGMs since several years.

Invitation to the 7th EDGG Field Workshop

Navarre, Spain, June 2014

Theme: *Plant diversity patterns along altitudinal and continentality gradients*



Bardenas, Mediterranean Region.



Larra, Alpine Region.



Baztan, Atlantic Region.

Background

The EDGG Research Expeditions have a tradition since 2009, when the first such expedition was conducted in Transylvania, Romania (Dengler et al. 2009, 2012a). The 2nd expedition 2010 went to Central Podolia, Ukraine (see Bulletin 8: 15–16), the 3rd 2011 to the Western Bulgarian Mts. (see Bulletin 12: 10–14). In 2012, there were two such expeditions, one to Sicily, Italy (Guarino et al. 2012), and one to Northern Greece (see Bulletin 16: 18–20). In 2013 the expedition reached Central Asia, in the Altai mountain foreland (see Bulletin 19–20: 31–48). The aims of these international expeditions are to sample high-quality data on species composition and diversity of dry grasslands and related communities in understudied regions of the Palaearctic, to use these data for joint publications in international journals, and to exchange knowledge (species determination, field sampling, analytical methods) among participants with different background.

The basic idea to use the data from the EDGG Research Expeditions to produce high-ranking publications is making good progress. Two ISI papers from the first expedition have already been published (Dengler et al. 2012, Turtureanu et al. 2014), one on the third (Pedashenko et al. 2013), and several other papers from various expeditions are in preparation. Some of the plots sampled during the EDGG Research Expedition in Transylvania carry the world records of vascular plant species richness, published very prominently by Wilson et al. (2012).

For 2014, there will be two novelties. First, after having conducted EDGG Research Expeditions in various parts of East, Southeast and South Europe and in Central Asia, we will have the first such

event in western Europe, namely in the north of the Iberian Peninsula. Second and more importantly, starting with 2014 our former expeditions will undergo a profound programmatic change as expressed in the new title “Field Workshop”. While teaching, learning and discussing state-of-the-art ecological sampling methods and associated analytical approaches were always implicit part of the “EDGG Expeditions”, the new title and the new programme structure make this philosophy more explicit.

Philosophy of the EDGG Field Workshops

The general philosophy of the EDGG Field Workshops is similar to that of summer schools and intensive workshops held by other scientific organisations. However, while summer schools are normally restricted to MSc and or PhD students, EDGG Field Workshops are open to EDGG Members at any academic level who either want to deepen their methodological knowledge or contribute to an advancement of methodological approaches by discussion with other colleagues interested in similar topics. Particularly welcome are PhD students and young Postdocs who plan to do field sampling of grassland vegetation and wish to discuss their sampling ideas before they start. The EDGG Field Workshops are very intensive events of typically 7–12 days duration, restricted to a small group of highly motivated participants, preferably from different countries and academic levels. They contain a **mixture of oral presentations, intensive methodological discussions, and joint field sampling with advanced sampling methods**. The core aims of the EDGG Field Workshops are knowledge exchange and capacity building among scientists from various countries regarding planning of observational studies on biodiversity patterns, species determination, field techniques, statistical techniques, vegetation classification approaches and scientific writing.

There are three types of **oral presentations**: (1) key note lectures by the Workshop organisers on the study area and on sampling methodology; (2) presentations by participants about results from similar studies (10 min presentation + 5 min discussion); (3) presentations about

concepts/methods of emerging studies (e.g. PhD projects) at early stages (10 min presentation + 15 min discussion). Presentations of methodological approaches in the field are also welcome.

The **field data** collected will be contributed to the public dataset from the EDGG Expeditions/Field Workshops (stored in the Database Species-Area Relationships in Palaeartic Grasslands; GIVD ID EU-00-003; Dengler et al. 2012b) and will subsequently be available for joint publications by the participants, which will be planned during the Field Workshop. There will also be an option that one or two participants from the Field Workshop can visit the lab of one of the senior scientists of the team to work on such joint analyses and papers (financed by an EDGG Fellowship or other sources).

Concept of the biodiversity sampling employed during the Workshop

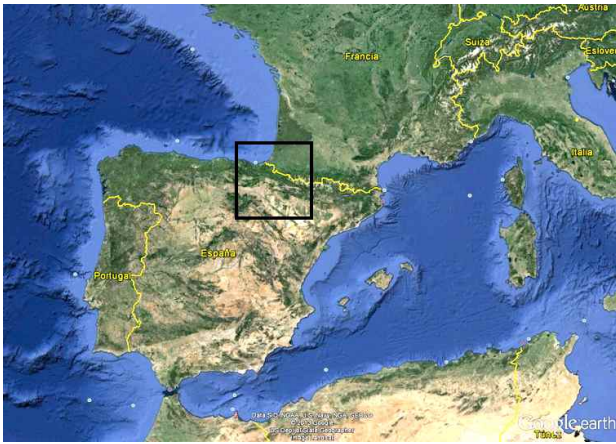
The basic idea is to sample standardised, high-quality data on species composition and diversity of dry grasslands and related communities, typically in understudied regions of the Palaeartic.

The sampling design will be identical to that of the six former EDGG Research Expeditions (and several other studies) to allow large-scale comparisons. Its core points have been proposed by Dengler (2009). We use on the one hand intensive nested-plot sampling covering plot sizes of 0.0001, 0.001, 0.01, 0.1, 1, 10 and 100 m² and on the other hand supplementary 10-m² relevés (for details, see Dengler et al. 2012a). In both cases, all terricolous vascular plants, bryophytes and lichens are recorded, and for the 10-m² (sub-) plots also percentage cover of species and environmental data (slope, aspect, micro-relief, soil depth + a mixed soil sample to be analysed in the lab).

Suggestions from participants regarding additional data collection and fieldwork that could be incorporated into the workshop programme are welcome and can be discussed with the organizers (such as biomass or trait measurements) or sample further taxa on the same plots (e.g. snails, grasshoppers,...).



Baztan (Eastern Basque subsector, Atlantic Region). Carici piluliferae-Agrostietum curtisii. Photo: Asun Berastegi



7th EDGG Field Workshop

The 7th EDGG Field Workshop will take place in Navarre (northern Spain) from 15th to 24th of June 2014. This event is organised by Idoia Biurrun and Itziar García-Mijangos (University of the Basque Country) and Asun Berastegi (Gestión Ambiental de Navarra, S.A) in cooperation with Jürgen Dengler (EDGG Executive Committee, University of Bayreuth & German Centre for Integrative Biodiversity Research).

There are 12 places for EDGG members to join this expedition (in addition to the four organisers). Participants from any country and any academic level (BSc student to professor) are welcome. In order to ease the subsequent analytical work, we particularly appreciate the participation of people experienced in any of the following fields: good knowledge in bryophytes/lichens/critical vascular plants; experience in high-quality field sampling or advanced analytical methods of biodiversity patterns.

Approximate costs are 550–650 €, including transport, meals and accommodation from arrival at Bilbao airport until departure from the same airport. The exact price will be confirmed later. It is also possible to apply for financial support for participation (travel grants, see below), though this requires membership of the IAVS (joining is possible at <http://www.iavs.org/MembershipRenew.aspx>). Membership rates are generally low, and further reduced for students, and persons from low-income countries can apply for free membership (<http://www.iavs.org/AwardsFinancial.aspx>).

Deadline for registration: 31 January 2014

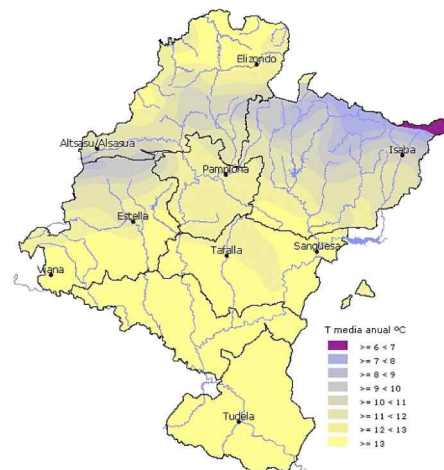
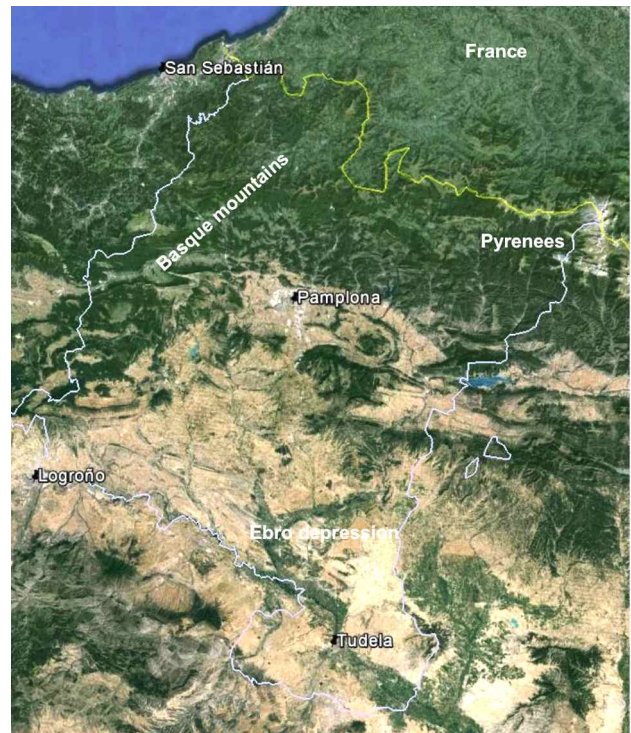
Preliminary schedule

1st day (June 15th) - Arrival to Bilbao international airport and travel to Beire, south of Navarre. If flights arrive late in the afternoon, night in Bilbao.

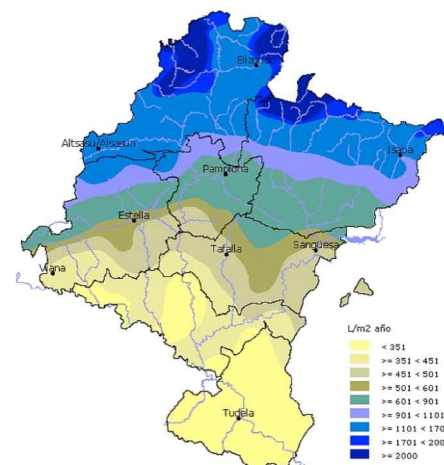
2nd day (June 16th) - fieldwork in the Bardenas-Monegros sector. Lygeo-Stipetea. Night in Beire.

3rd day (June 17th) - fieldwork in Riojan sector. Lygeo-Stipetea. Brachypodietalia phoenicoidis. Night in Beire.

4th day (June 18th) - fieldwork in Andia mountains and foothills (Castilian-Cantabrian, Navarran-Alavensean). *Festuco-Brometea*, *Festuco-Poetalia ligulatae*. Night in Beire.



Map of mean annual temperature



Map of annual precipitation

5th day (June 19th) - field work in Romanzado-and surroundings (Castilian-Cantabrian, Somontane-Aragonese). *Brachypodietalia phoenicoidis*, *Ononidetalia striatae*. Night in Isaba.

6th day (June 20th)- fieldwork in Pyrenean valleys and hills. *Festuco-Ononidetea*, *Festuco-Brometea*. Night in Isaba.

7th day (June 21th) - fieldwork in Pyrenees. *Kobresio-Seslerietea*, *Caricetea curvulae*, *Nardetea*. Night in Isaba.

8th day (June 22th) - fieldwork in Ortanzurieta (only if spring does not come late) and Aralar mountain ranges and foothills (Basque-Cantabrian: Eastern Basque). *Nardetea*, *Festuco-Brometea*, *Ononidetalia striatae*. Night in Etxarri-Aranaz.

9th day (June 23th) - fieldwork in Urbasa ranges and in their foothills. *Festuco-Brometea*, *Ononidetalia striatae* (Basque-Cantabrian: Navarran-Alavensean). Night in Etxarri-Aranaz (or in Bilbao according to flight schedules).

10th day (June 24th) - Back in Bilbao. (1 hour and a half from Etxarri-Aranaz to the airport).

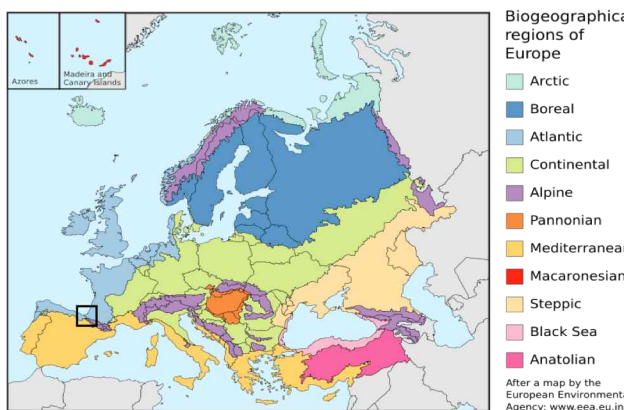
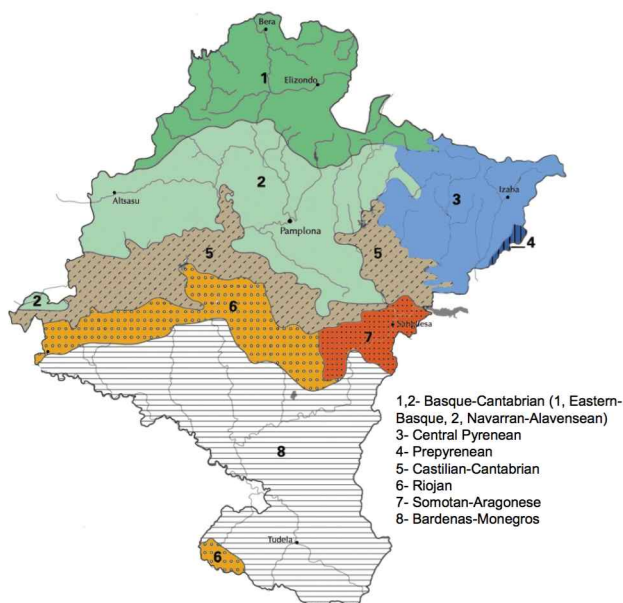
The lecture & discussion blocks will be held during the evenings or during spells of bad weather that prevent fieldwork.

How to register

Applications to participate should be sent not later than 31 January 2014 to both of the following contact persons (this applies also to all your subsequent e-mails):

Idoia Biurrun (idoia.biurrun@ehu.es)

Jürgen Dengler (juergen.dengler@uni-bayreuth.de)



Cattle in subalpine grasslands, western Pyrenees.

Please give as subject of your e-mail “EDGG Field Workshop 2014” and provide your name, surname, affiliation, address, e-mail, academic degree/position and age. Further we need a short statement of interest and competences (approx. 10 lines), in which you should explain why you wish to participate in this Field Workshop, what you would contribute to its success (including any subsequent publications, e.g. knowledge of N Iberian flora, of bryophyte and lichens or of analytical methods or additional ideas for field sampling) and what you would like to gain from your participation. Please also indicate in your application if you have special dietary requirements.

If you wish to give an oral presentation, please attach, in a separate Word document, a half-page abstract and indicate whether this presentation belongs to category 1, 2 or 3 (see details above).

If you wish to apply for travel grants from the IAVS Global Sponsorship Committee, you need to send your complete application in cc: also to the IAVS Administrator, Michael Lee (michael.lee@unc.edu). Be aware that



Clayey foothills in Bardenas.

such an application is only possible if you are IAVS member in the year 2014 and you give an oral presentation during the Field Workshop. Additional information needed for such travel grant applications are:

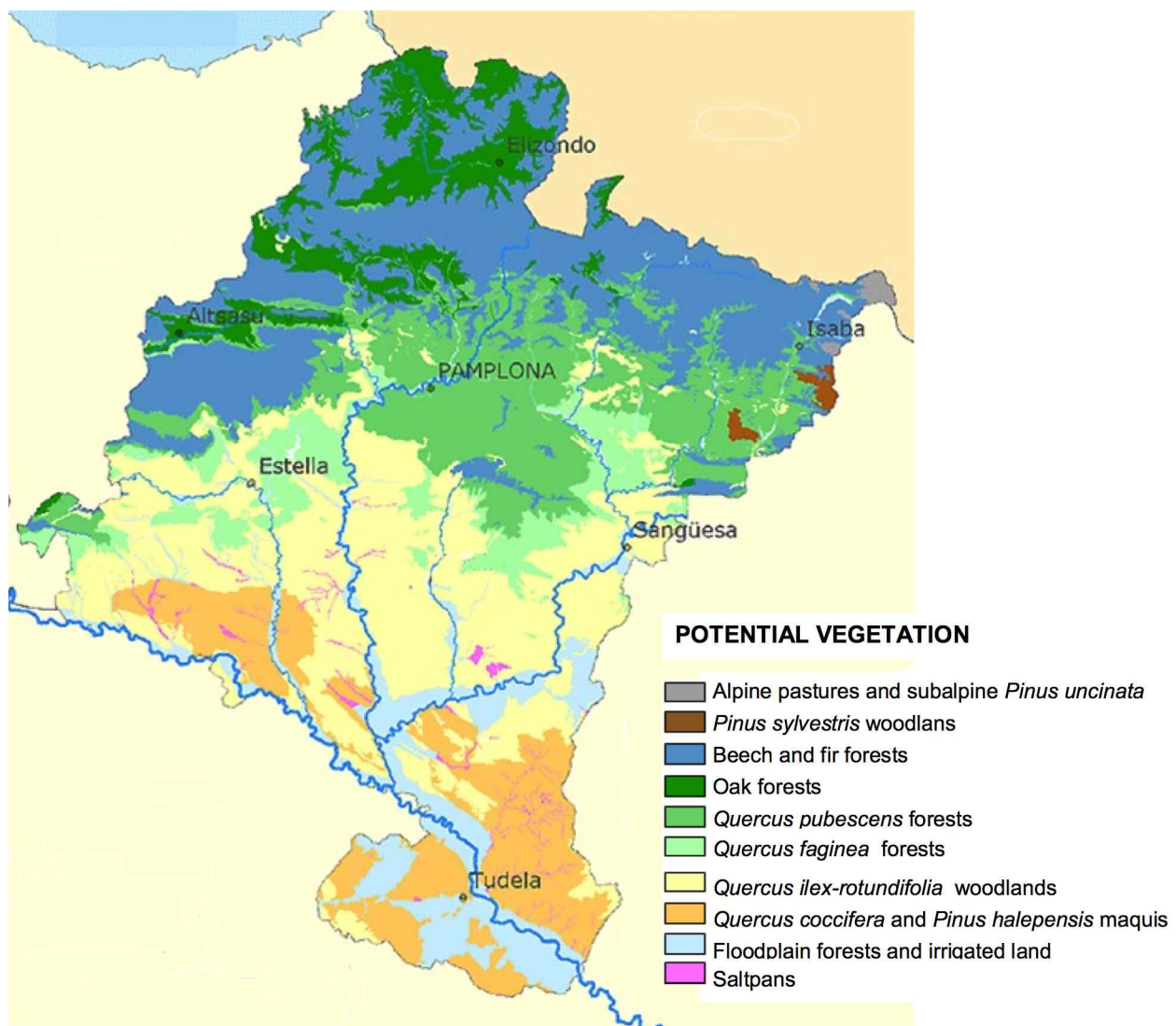
- specification that you are IAVS member in 2014;
- estimated costs of travel to and from Bilbao;
- information whether you receive other funding;
- indication whether your participation is only possible with financial support;
- indication whether you are also applying for financial support to attend the European Dry Grassland Meeting in Tula (you can receive financial support for only one of these meetings and therefore have to indicate your preference).

If there are more applications for participation than available places, the organisers will make a selection based on the information provided by you. Notification of acceptance (or otherwise) will be sent by 3rd March 2014. The decision on potential travel grants and the amount of money awarded to each of the scholars will be made by the EDGG Executive Committee in consultation with the IAVS Global Sponsorship Committee.

The study area

Navarre is a Spanish region of 10.391 km² size, located in the northern-central part of the Iberian Peninsula. It lies between the Pyrenean mountains (north-east) and the Ebro depression (south). The north and northwest are under the influence of atlantic climate due to the closeness to the Bay of Biscay. The Basque mountains and Pyrenees have a temperate climate, and the Ebro depression a Mediterranean climate. Transitional areas have temperate submediterranean climates.

Three biogeographic regions join in Navarre: Alpine, Atlantic and Mediterranean. The **Alpine region**, with temperate continental climate, is represented in the northeastern part of Navarre by two biogeographical sectors: Central Pyrenean, that includes the axial chain of western and central Pyrenees and occupies most of this region in Navarre, and Prepyrenean, that only reaches some mountain passes in the eastern part. Supra- to cryrotenerate thermotypes and humid to ultrahyper-humid ombrotypes are present in this Alpine region of Navarre. The **Atlantic region** occupies the north and northwest of Navarre, and is represented only by the Basque-Cantabrian sector, climatically temperate oceanic, with two subunits in Navarre: Eastern Basque, coastal subsector with very oceanic and rainy climate,



meso-supratemperate and hyper-ultrahyperhumid, and Navarran-Alavensean subsector, already in the Ebro basin, drier and more continental, although still temperate, mostly meso-supratemperate humid. The **Mediterranean region** accounts for four sectors in Navarre. In the temperate-mediterranean transition we find the Castilian-Cantabrian sector, still quite mountainous, mostly temperate sub-mediterranean supratemperate subhumid. On the way down to the Ebro valley there are two climatically similar sectors: Riojan and Somontan-Aragonese. Both are typically mediterranean, with mesomediterranean thermotype and dry ombrotype, but the Somontan-Aragonese sector is more influenced by flora and vegetation of the eastern Iberian Peninsula. Finally the south of Navarre is included in the Bardenas-Monegros sector, that occupies the central Ebro depression. Climate here is hotter and drier, with some semidesertic areas, mostly mesomediterranean semiarid-dry climate.

Regarding the potential vegetation of Navarre, deciduous forests are dominant in the north, in the Atlantic and Alpine regions, whilst in the Mediterranean region sclerophyllous evergreens are dominant in forests and woodlands. Marcescent trees are the main forest trees in the central transition zone, both in Navarran-Alavensean subsector and Castilian-Cantabrian sector (Loidi & Bascos 2006).

In the Atlantic region, that is, the Basque-Cantabrian sector, *Quercus robur* dominates in the mesotemperate, and locally, on limestone slopes, *Quercus ilex*. In the supratemperate, the dominant tree is *Fagus sylvatica*, in a few places *Quercus petraea*. In the Eastern Basque subsector acidophilous forests prevail, due to the siliceous bedrock (granite, schist, sandstone) and to the high precipitation. The landscape is formed by meadows in the valley bottoms and heathland, pine plantations and oak forests in the slopes. In the mountains, beech forests, heathlands and acidophilous grasslands with *Agrostis curstisii*. In the Navarran-Alavensean subsector basiphilous vegetation is more common, and in wide areas with submediterranean climate *Quercus pubescens* becomes the dominant tree in slopes and hills. Dry grasslands of *Brometalia* and scrubs of *Genistion occidentalis* are common in this area. Meadows occur in the rainiest areas, whilst cereal crops are more common in deep soils of the driest ones. On sandstone *Quercus pyrenaica* forests develop. As regards to the Alpine region, *Quercus pubescens* is very common in the lowest supratemperate belt, and beech replaces it in cooler and more humid slopes. In the orotemperate (subalpine) *Pinus uncinata* woodlands constitute the potential vegetation, and dry grasslands of *Festuca scoparia* and *Festuca eskia* develop on limestones and siliceous rocks, respectively. The marcescent *Quercus faginea* and the sclerophyllous *Quercus rotundifolia* are the dominant trees in the potential vegetation of Castilian-Cantabrian sector, the former in deep soils, more humid, and the latter in rocky slopes. Cereal crops dominate the landscape in the deepest soils, and rocky slopes are mostly occupied by the potential holm oak woodlands and some scrublands and grasslands. In the Riojan and Somontan-Aragonese sectors, *Quercus rotundifolia* is the absolute dominant in the potential vegetation, but landscape is mostly formed

by cereal crops and vineyards. In Bardenas-Monegros sector holm oak is relegated to some locally humid places, being the landscape dominated by a maquis and its replacement scrubland and dry grasslands. In this last sector salt pans and gypsophilous scrubs are a typical feature of the landscape.

Dry grassland of this diverse territory have been studied by many authors, both in specific works (Berastegi et al. 2005, 2010, Darquistade et al. 2004, Peralta & Olano 2001) and in several PhD theses. A complete description of grasslands and meadows in Navarre has just been published in the series Guineana (Berastegi 2013). Most of these studies are purely descriptive, and many aspects of grasslands, particularly those related to diversity patterns, have not yet been studied. In this research expedition we will try to assess the most predictive environmental variables for patterns of species richness distribution and plant traits. We will also try to check which bryophytes and lichens occur in which type of grassland, because these organisms are proven to be important elements of dry grasslands (Berg & Dengler, 2005) and none of them is mentioned in the available phytosociological literature about the dry-grasslands in Navarre.

Our field survey will be carried out in the following syntaxa (at alliance level):

CARICI RUPESTRIS-KOBRESIETEA MYOSUROIDIS OHBA 1974

***Kobresietalia myosuroidis* Oberdorfer 1957**

Oxytropido-Kobresion myosuroidis Br.-Bl. (1948) 1949

KOBRESIO MYOSUROIDIS-SESLERIETEA CAERULEAE BR.-BL. 1948

***Seslerietalia caeruleae* Br.-Bl. in Br.-Bl. & Jenny 1926**

Primulion intricatae Br.-Bl. ex Vigo 1972

Salicion pyrenaicae Vigo ex Rivas-Martínez

CARICETEA CURVULAE BR.-BL. 1948

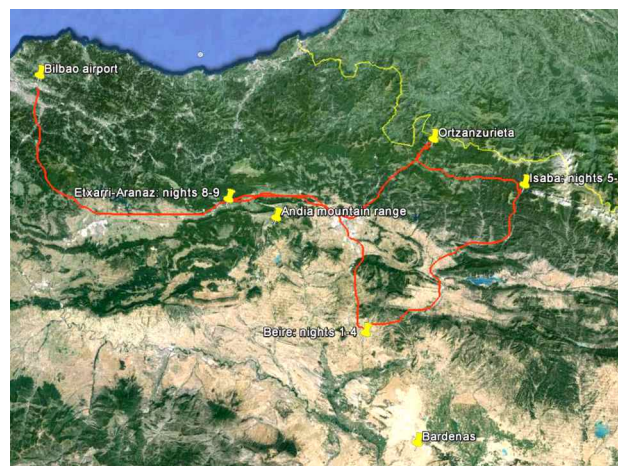
Caricetalia curvulae Br.-Bl. in Br.-Bl. & Jenny 1926

Festucion eskiae Br.-Bl. 1948

NARDETEA STRICTAE RIVAS GODAY IN RIVAS GODAY & RIVAS-MARTÍNEZ 1963

***Nardetalia strictae* Oberdorfer ex Preising 1949**

Nardion strictae Br.-Bl. 1926



Violion caninae Schwickerath 1944

FESTUCO HYSTRICIS-ONONIDETEA STRIATAE
RIVAS-MARTÍNEZ, T.E. DÍAZ, F. PRIETO, LOIDI
& PENAS 2002

Ononidetalia striatae Br.-Bl. 1950

Festucion gautieri Br.-Bl. 1948

Genistion occidentalis Rivas-Martínez in Rivas-Martínez,
T.E. Díaz, F. Prieto, Loidi & Penas 1984

Festuco hystricis-Poetalia ligulatae Rivas Goday &
Rivas-Martínez 1963

Plantagini discoloris-Thymion mastigophori A. Molina &
Izco 1989

SEDO ALBI-SCLERANTHETEA BIENNIS BR.-BL.
1955

Sedo-Scleranthetalia Br.-Bl. 1955

Sedion pyrenaici Tüxen ex Rivas-Martínez, T.E. Díaz, F.
Prieto, Loidi & Penas in T.E. Díaz & F. Prieto 1994

Sedion micrantho-sediformis Rivas-Martínez, P. Sánchez
& Alcaraz ex P. Sánchez & Alcaraz 1993

FESTUCO-BROMETEA BR.-BL. & TÜXEN EX BR.-
BL. EX KLIKA & HADAK 1944

Brometalia erecti Br.-Bl. 1936

Potentillo montanae-Brachypodium rupestris Br.-Bl. 1967

Brachypodietalia phoenicoidis Br.-Bl. ex Molinier 1934

Brachypodium phoenicoidis Br.-Bl. ex Molinier 1934

MOLINIO-ARRHENATHERETEA TÜXEN 1937

Arrhenatheretalia Tüxen 1931

Arrhenatherion Koch 1926

POETEA BULBOSAE RIVAS GODAY & RIVAS-
MARTÍNEZ IN RIVAS-MARTÍNEZ 1978

Poetalia bulbosae Rivas Goday & Rivas-Martínez in
Rivas Goday & Ladero 1970

Astragalo sesamei-Poion bulbosae Rivas Goday &
Ladero 1970

TUBERARIETEA GUTTATAE (BR.-BL. IN BR.-BL.,
ROUSSINE & NÈGRE 1952) RIVAS GODAY &
RIVAS-MARTÍNEZ 1963

Tuberarietalia guttatae Br.-Bl. in Br.-Bl., Molinier &
Wagner 1940

Thero-Airion Tüxen & Oberdorfer 1958

Brachypodietalia distachyi Rivas-Martínez 1978

Sedo-Ctenopsion gypsophilae Rivas Goday & Rivas-
Martínez ex Izco 1974

Brachypodium distachyi Rivas-Martínez 1978

LYGEO SPARTI-STIPETEA TENACISSIMAE
RIVAS-MARTÍNEZ 1978

Lygeo-Stipetalia Br.-Bl. & O. Bolòs 1958

Thero pseudochamaeptyios-Brachypodium retusi Br.-Bl.
1925

Agropyro pectinati-Lygeion sparti Br.-Bl. & O. Bolòs
1958 corr. Rivas-Martínez, Fernández-González & Loidi
1999.

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*Bardenas Reales (Bardenas-Monegros sector, Mediterranean region). Dry grassland of *Ruto angustifoliae*-*Brachypodium retusi* with *Philomis lychnitis*. Photo: A. Berastegi*



Surroundings of Etxarri-Aranaz.



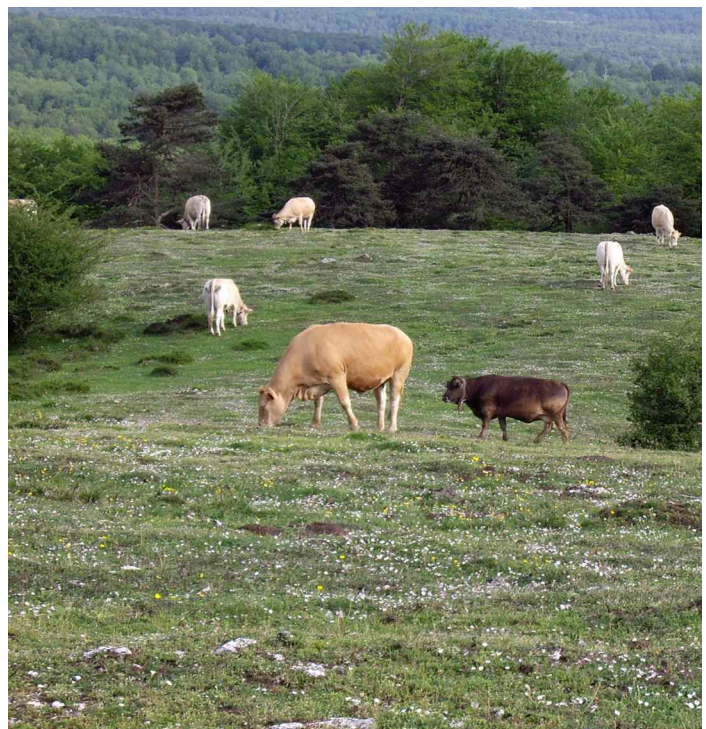
Larra-Piedra San Martin. Typical landscape in the western Pyrenean subalpine belt: mosaic of *Nardion strictae*, *Festucion scopariae* and *Primulion intricatae*. Photo: A. Berastegi



Fritillaria pyrenaica in *Calamintho-Seselietum*. Foothills of Urbasa mountains. Photo: A. Berastegi



Jurineo humilis-Festucetum hystricis and *Helianthemo incani-Koelerietum vallesianae* in Andia Mts. Photo: A. Berastegi



Sheep of latxa breed, typical of Basque-Cantabrian sector (left) and cattle in Urbasa mountain range (right). Photo: A. Berastegi

Planned EDGM in Mainz, Germany in May/June 2015 First announcement and short introduction to the venue



Middle Rhine Valley. Photo: T. Becker

The 12th European Dry Grassland Meeting (EDGM) is planned to be held in Mainz, southwest Germany, and will be hosted by the Universities of Mainz and Trier. The venue of the conference will be the Green School, within the Botanical Garden of the Institut für Spezielle Botanik of Mainz University. The main topic of the conference will be the **interface of population biology and community ecology of dry grassland and steppe species**. This first announcement of the 12th EDGM will provide a short introduction to the conference venue and the area of the planned excursions.

Mainz is the capital of the federal state Rhineland-Palatinate, with about 200,000 inhabitants. The town is located precisely on the 50° northern latitude, on the Rhine River and is well-connected both by train and plane. Frankfurt Airport is about 20 km east of Mainz, and about 70 km west of Mainz there is the low budget Frankfurt-Hahn Airport, which is connected to Mainz by a shuttle bus.

The federal state Rhineland-Palatinate in south-west Germany is dominated by large natural landscapes, such as the Pfälzer Wald forest or the Eifel Mountains. In the river valleys in particular, the climate is warm and dry, which is ideal for wine production and the development of extensive dry grasslands. The dry grasslands of the Rhineland-Palatinate mostly grow on siliceous parent

rock, mostly originating from as far back as the Devonian Period. In parts, the bedrock is the result of ancient volcanic activity, e.g. the case in the area of Rhine Hesse, which comprises the landscape between Mainz and the adjacent mountain area to the west. Rhine Hesse is the *locus classicus* and a core area of Koelerio-Phleion communities, which are intended to be one of the topics of the excursions. On soils influenced by loess layers, there are steppe-like grasslands which contain such steppe species as *Stipa* spp. and *Oxytropis pilosa*, while sites without loess are characterised by acidophytic siliceous dry grasslands with e.g. *Helictotrichon pratense*, several *Festuca ovina* agg. species (mainly *F. duvallii*, *F. heteropachys*) and large stands of *Genista sagittalis*. The area is also very picturesque, with many white wine taverns, so-called *Straußenwirtschaften*, which we will also “explore” during the excursion in this area.

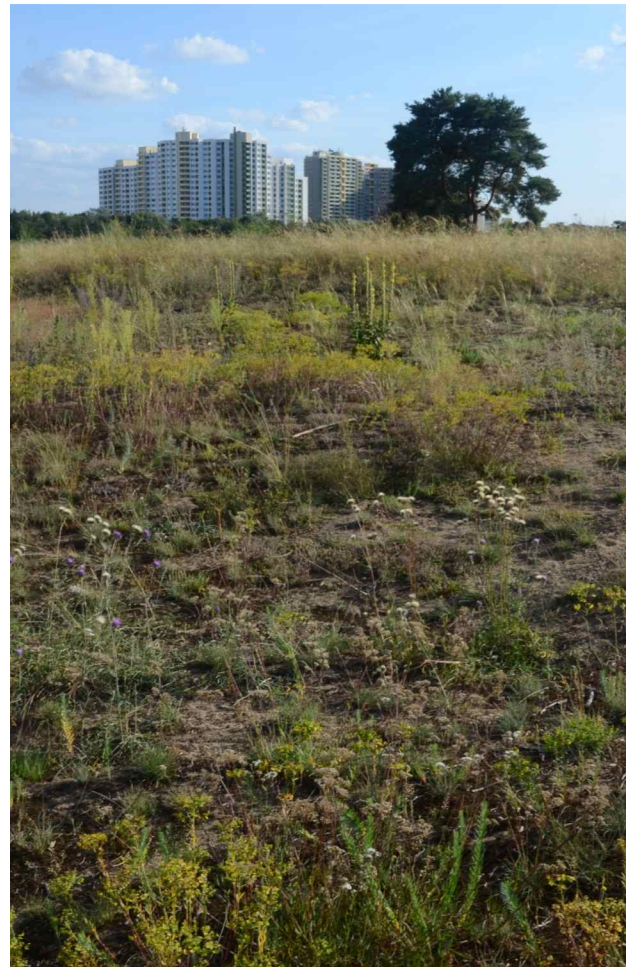
At the margin of Mainz, close to the conference venue, there is an area known as the Mainz Sand Dunes. Here, the westernmost dry continental sand grasslands are found (*Koelerion glaucae*, variants of the *Festucion valesiacae* on sandy soil), which contain many rare and endangered species. This area is the only known location of *Onosma arenaria* in Germany and is an example of relict vegetation including rare and endangered species that had survived in this restricted and isolated area since the late Pleistocene.

Finally, an excursion is planned to the Middle Rhine Valley, to the north of Mainz. This area harbours rock slopes with extensive xerothermic vegetation complexes containing rocky grasslands (*Koelerio-Phleion*) and xerophilic *Acer monspessulanum* forests (*Quercion pubescentis*). Moreover, this valley is a culturally important place for German ancient history. It was here that the Nibelungen Saga took place, in which a German king became invincible by bathing in the blood of a dragon, and finally the gold of the kingdom was sunk in the Rhine River and became the legendary Rhine Gold Treasure (for which we may look while walking along the shore of the Rhine).

Throughout the meeting, there will be the opportunity to visit the Botanic Garden. One focus of this Botanic Garden is xerothermic habitats, including not only a reconstruction of the Mainz Sand Dunes but also a South Russian steppe area that was established using seed material from the EDGG Expedition to Ukraine in 2010. We would like to present our experience with both single species and the community when building up this artificial South Russian steppe in the Botanic Garden with plants from the second EDGG Expedition.

Detailed plans for the conference will be presented at the EDGG General Assembly 2014 in Tula, where also the final date will be confirmed. The first circular will be distributed to EDGG members during summer/autumn 2014 and the conference homepage will subsequently be launched.

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Mainz Sand Dunes. Photo: T. Becker



Rhine Hesse. Photo: T. Becker

Keep Your Eyes on the Fire: Prescribed burning as an old-new opportunity for grassland management

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Abstract and motivation: *We noted the burning interest concerning the application of prescribed burning as an alternative grassland management technique at the EDGG co-organized Open Landscapes conference in Hildesheim during and after our presentation about the possible application of prescribed burning in European grasslands (Deák, B., Valkó, O., Török, P., Tóthmérész, B.: Fire as an alternative management tool – adaptation of North-American grassland burning practices to European grassland conservation. Open Landscapes – Ecology, Management and Nature conservation. Hildesheim, Germany, 29 Sept - 03 Oct 2013). Some conservationists highly welcome prescribed fires, while others are against it. These contrasting attitudes are because we (i) lack of proper scientific information on both short- and long-term effects of fires on grassland biodiversity, (ii) because of the generally negative attitude generated also by the international and national media reporting catastrophic damages in nature, human life and property caused by wildfires and arson, and because of (iii) the confusion of wildfires and arson with controlled and carefully designed prescribed fires. With the following forum paper we would like to stimulate discussion and generate further research activity in this topic, strongly referring to our recent paper published in Basic and Applied Ecology (Valkó et al. 2013) indicating the most important conclusions based on this carefully conducted systematic review.*

Keywords: wildfire; arson; biodiversity conservation; species richness; prairie; endangered species

Introduction

Wildfires and human-induced burnings are present in most European grassland types. In historical times, traditional burning played an important role in land-use and was applied in a sustainable way based on traditional ecological knowledge. Due to socio-economical changes, traditional fire use has been ceased in many parts of Europe, and/or replaced by frequent technical fires and arson. Despite of the considerable extension and frequency of grassland burning and its impacts on grassland species, published European studies focusing on these topics are rather scarce. To provide a qualitative analysis of fire effects on grassland species, prescribed burning experiments offer the most appropriate sources of information. Furthermore, prescribed burning could also offer an alternative cost-effective way of grassland biodiversity management.

Our goal was to evaluate the results of European attempts to use prescribed burning in grassland management and assess whether or not the targeted objectives were achieved. We collected prescribed burning studies from North-America as a reference system to identify which elements of fire management can be adapted to the European grassland conservation and management strategy. To assess the current European attitude on burning, we contacted grassland specialists across Europe to gain information concerning (i) the legislative regulation of burning, (ii) the occurrence and frequency of wildfires, technical fires and arson in grasslands and (iii) the possibilities and limitations of the use of prescribed burning in their countries. We distributed questionnaires via direct e-mailing, through the 13th Bulletin

of European Dry Grassland Group (December 2011) and via the mailing lists of EDGG and the European Vegetation Survey (1,600 people). We gained information from 49 colleagues from 19 countries.

Current situation of burning in European grasslands

Although fire is an important factor in European grasslands, the effects of fire on flora, fauna and habitat structure is poorly studied and rarely documented; we found only 11 publications in English about prescribed fires in European grasslands. In most of the studies, dormant-season burning was carried out on an annual basis with valuable long-term monitoring. Most of these studies concluded that annual burning solely is not appropriate to maintain the targeted structure and species composition of grasslands (e.g. Kahmen et al. 2002, Köhler et al. 2005). Based on the experiences from North-America we suppose that the reason for this was the too frequent burning, which did not allow the vegetation to recover between the burns.

Based on our questionnaire survey, fire was used as a part of the traditional grassland management to improve forage quality, reduce accumulated litter or woody encroachment in many countries (Austria, Czech Republic, Estonia, Greece, Hungary, Poland, Russia, Slovakia). Recently, traditional burning practices have disappeared from most of the countries because of socio-economic changes, agricultural intensification and legislative issues. We argue that traditional ecological knowledge on grassland burning holds a great potential for planning and evaluating grassland management measures, but the ethnographic and historical evidence

should be elaborated more in detail to provide vital suggestions for its implementation.

Illegal uncontrolled burning is practiced nowadays in extensive areas of Central-, Southern- and Eastern-European countries, causing serious conservation problems (Romania, Hungary, Bulgaria and Ukraine). There are several motives for setting fires illegally like (i) the improvement of pastures, especially in mountain areas (Greece, France or Romania); (ii) to gain Natura 2000 subsidies without labour-intensive management actions, typically in lowland hay-meadows (Romania) or (iii) fires are set just for “fun” or vandalism (Hungary, Romania and Ukraine). Because of the unpredictable and often negative experiences from uncontrolled fires, even prescribed burning is prohibited in most of the European countries, to protect human life and property (Greece) or to mitigate air pollution (Austria or Hungary). There are some countries where prescribed burning is permitted with restrictions regarding the timing and extension of prescribed fires and the fuel and weather conditions for burning (Germany, France, Spain, Portugal, the United Kingdom, the Netherlands and Slovenia). There are detailed codes and training for professional teams who apply prescribed burning mainly for shrubland and heathland management and fire hazard reduction. In a few countries, prescribed burning is included in the management of protected areas (e.g. in France or Portugal), but only a few case studies are available from grasslands.

What can we learn from European and North-American case studies?

In North-America prescribed burning is frequently used for nature conservation purposes in grasslands, which is also indicated by the huge number of studies on this topic. The overall aim of burning is often the reintroduction of natural disturbance regimes (MacDougall & Turkington 2007). Prescribed burning is often combined with other management tools (grazing or seed sowing). Although the application of the North-American methodology offers viable perspectives for the European management practice we stress that there is a need for focused case studies to test whether the well-developed North-American burning regimes can be adapted to the European grassland conservation strategy. Given the differences in history, climate and composition of grasslands in the two continents, the elements of North-American burning practice can only partly be applied in Europe. As a first step, North-American burning regimes should be evaluated to determine in which European grasslands prescribed burning can be an appropriate management option. Based on the questionnaire survey and the reviewed studies, the most promising management objectives of prescribed burning experiments could be the following.

Reducing accumulated biomass. Both European and North-American studies found that burning in winter or early spring can effectively eliminate accumulated



Figure 1. Burning in a mesic grassland in Hungary (a). On the burned patch, vegetation recovered rapidly, providing forage for herbivores several weeks before the unburned patches did (b). For the conservation of endangered species, the appropriate timing of burning is crucial. For flightless species, like the endemic grasshopper *Isophya costata* (c), summer burning can be detrimental. In summer, immobile life stages, like eggs of the endangered *Maculinea alcon* (d) are also vulnerable to fire, while adult butterflies, like the endangered *Lycaena dispar* (e) can easily escape (Photos: T. Miglécz, a; A. Kelemen, b and d; B. Deák, c and e).

biomass but it has only minor effects on the flora and fauna (Ryser et al. 1995, Rowe 2010). Based on these findings, prescribed burning should be tested on sites where management by grazing or mowing is not feasible, like in grasslands located far from farms or settlements. Besides effective biomass removal, burning can result in untargeted species composition in abandoned grasslands if applied too frequently (Kahmen et al. 2002, Wahlman & Milberg 2002). Thus, proper fire return periods should be tested in various grassland types and also fine-tuned to site characteristics (e.g. the amount of living and dead biomass or the presence of noxious competitor species in the vegetation). Fire return periods (2-3 years; Fuhlendorf et al. 2009) applied in tall-grass prairies suggest that at least three years may be appropriate in European grasslands because they are evolutionary less adapted to fire than North-American ones.

Supporting target species by burning. Some European studies mentioned positive effects of burning on several rare or protected species by creating suitable germination microsites or warmer and drier microclimate. Focused case studies on certain target species could be integrated in future conservation actions. However, based on North-American experiences, burning is not recommended at sites where remnant populations of endangered species are present.

Management of open landscapes. Some European studies found that prescribed burning can help in the management of open landscapes by the prevention of woody encroachment (Page & Goldammer 2004, Rietze 2009). Based on North-American experiences, combination of fire and grazing (patch-burning management) can increase structural and functional diversity which can support the coexistence of species with different habitat requirements (Fuhlendorf et al. 2009). In extended grassland areas, prescribed burning can also be a proper tool for preventing huge and uncontrolled wildfires and accordingly it can contribute to the protection of personal safety and private property. We suggest that in extended open landscapes, like Central- and Eastern European steppes introduction of patch-burning management can increase landscape-level heterogeneity.

Invasion control. Despite the serious conservation problems caused by invasive species, application of fire against them has not been studied yet in Europe. In North-America, carefully designed prescribed burning is effectively used against several invasive species (Keeley 2006). Based on North-American studies, summer fires are the most effective in the suppression of invasives. Timing should be fine-tuned to the most susceptible period of the given invasive species (Pyke et al. 2010). Since summer fire can have detrimental effects on several grassland species, invasion control by prescribed burning should be first tested in highly infested areas without outstanding nature conservation values to avoid damaging populations of rare species.

Proposals and future perspectives

We suggest that prescribed burning of grasslands should be integrated into European nature conservation practice in the near future. However, given the limited number of published studies from Europe; further habitat-specific prescribed burning experiments are needed to find

specific application circumstances and management objectives. We also stress that a database of grassland fires should be established, to accumulate the traditional ecological knowledge, the practical knowledge and field experience of conservation managers concerning effects of fire on grassland habitats and species.

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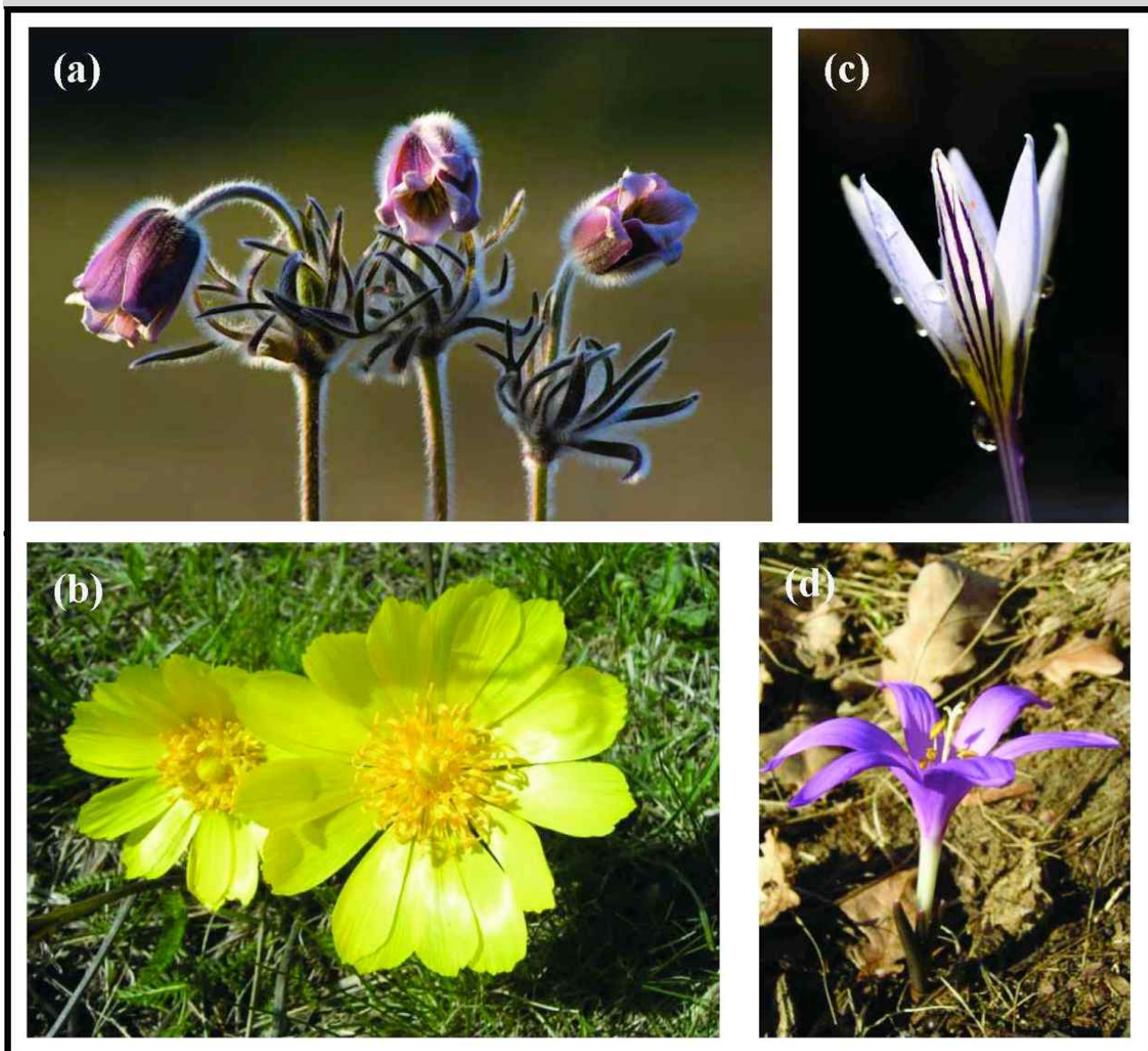


Figure 2. Fire can promote some endangered species by increasing microsite availability through the reduction of litter layer. Seed germination of *Pulsatilla pratensis* ssp. *hungarica* (a) and *Adonis vernalis* (b) is promoted by fire. *Crocus reticulatus* (c) and *Bulbocodium vernum* (d) can successfully regenerate from below-ground storage organs. (Photos: B. Deák, a,c; and A. Kelemen, b,d).

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Absolute zapovednost' as an ethical model

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Bulletin of the European Grassland Group 21 (2013): 33-35

Abstract: *There is a substantial difference between protected areas and wildlife sanctuaries. The former are a rational answer to the current decline of biodiversity and, as such, they are widely accepted in our society; the latter respond to an ethical need, which is not very common so far. This is the reason why administrators and public opinion are reluctant to accept the non-usability of areas that, to be preserved, require maintenance, patrolling and monitoring costs. The challenge of increasing the consensus around wildlife sanctuaries goes far beyond the establishment of protected areas. It lies in making desirable a sober lifestyle, with general awareness of the environmental consequences of all our actions. It lies in making people realise how perverse it is to hoard without limits; how illusory it is to claim pre-emption over what, in reality, belongs to everyone; how vain it is to spend time just to satisfy needless needs, believing that this is the right way to escape from a status that looks like "poverty" to our blinded eyes.*

Keywords: conservation; ethic; protected area; sanctuary

Foreword

I have read with pleasure the forum article on the concept of "absolute zapovednost'" (Boreiko et al. 2013), so I would like to share some additional thoughts on the substantial difference between protected areas and wildlife sanctuaries.

The 3P syndrome

The ever increasing importance given to nature conservation in recent decades has led to the foundation of protected areas around the globe at an unprecedented pace. In most cases, what is under protection is not primordial nature, of which very few traces remain, but the still surviving elements of a traditional cultural landscape, rich in patches of natural habitats, of which the establishment of protected areas endeavours to salvage the most significant relicts.

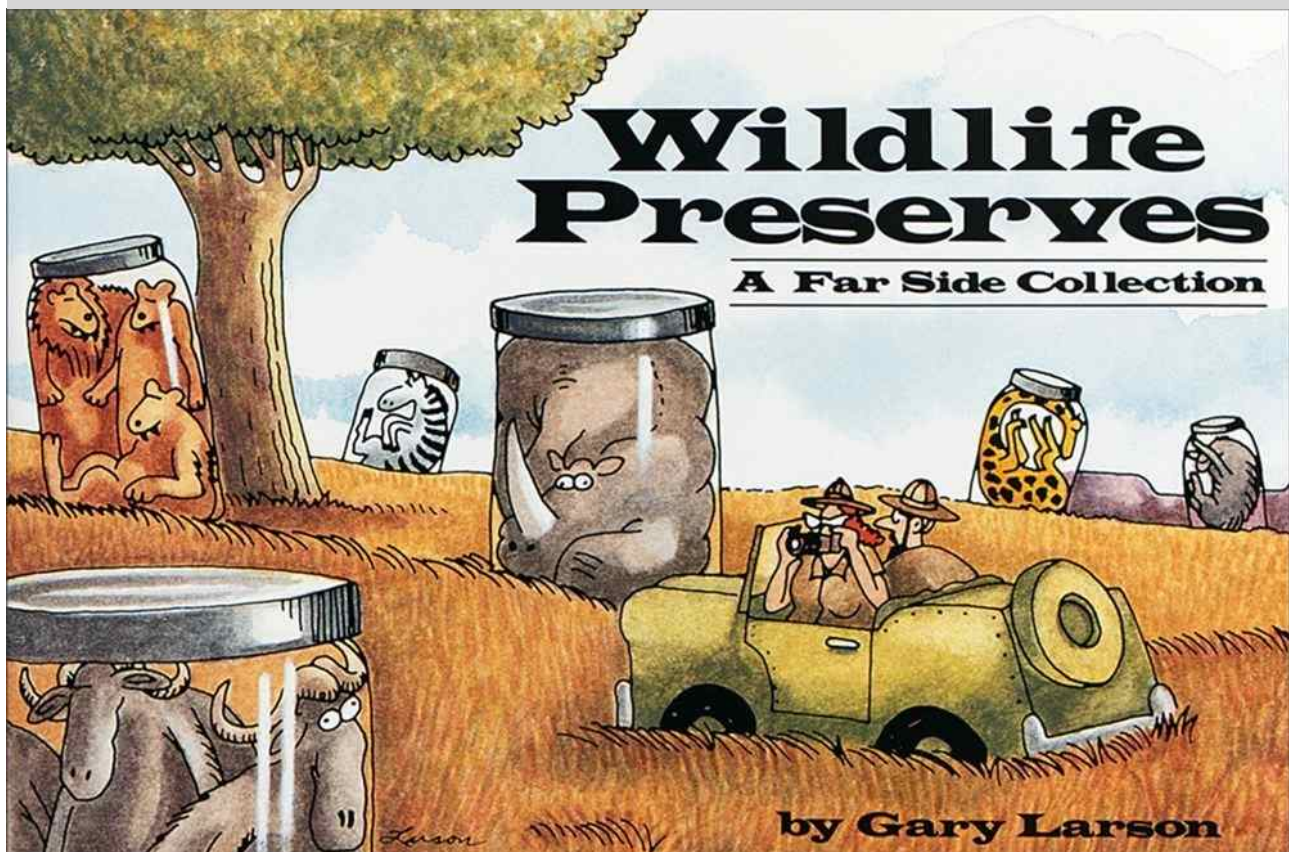
Modern environmental policies consider natural areas as a resource to be managed through measures and initiatives aimed not only at preserving biodiversity, but also to meet the demands of local people, in order to ensure the best compromise between ecosystem integrity and socio-economic development (Petermann & Ssymank 2007). The new managerial paradigm, including that of the European network "Natura 2000", is therefore remarkably anthropocentric, being the result of priorities set up by a variety of stakeholders. People denote this new managerial paradigm as "sustainable", i.e. respectful of the natural dynamic processes ensuring the homeostasis of ecosystems and the perpetuation of biodiversity.

Unable to cope with the many environmental problems caused by post-industrial civilization, we tend to idealize a "pre-industrial", "traditional" way of living as the precursor of the much-coveted "sustainable development". From this standpoint, the ever-increasing number of protected areas is a symptom of our inability to veer towards post-modernity: it is an unconditional surrender to the aggressive logic prevailing in today's society, oriented by the profit at any cost and fuelled by

the consumer dream of territorial marketing, which accounts for the natural preserves in terms of benefits, commodity outputs and ecosystem services (Guarino & Pignatti 2011).

Beyond the inevitable specificities related to individual contexts, the many kinds of protected areas established in Europe suffer a common syndrome, produced by the interaction of three main etiologies. The first problem is the remarkable 'parcelization' of management rules and restrictions, often inconsistent and handled by different institutions. The second etiologic agent is that of the 'processes in place', resulting from the fast socio-economic and land-use changes in our societies. The third etiologic agent is that of the 'people involved', due to the disparity of views between the many stakeholders who propose, use and manage protected areas. As is often the case when you have to make an agreement, it is necessary to prioritize. A common risk in the management of protected areas is to invest money to protect and perpetuate that which we like most, sometimes in contrast with natural dynamics, such as shrub encroachment, which would tend to modify the abundance and frequency of some species, such as the wild orchids, most dear to man (Guarino et al. 2011).

Protection that is not mediated by a dispassionate and thorough knowledge of the ecosystem dynamics can be detrimental, because it can easily end up making mistakes or indulging in particular the will of those who look on nature protection primarily in an economic and productive capacity. In this way, protected areas, whether they are natural parks, historical centres or quaint villages, are pushed (unknowingly?) towards a "productive" function: the object to be protected becomes a valuable frame within which to develop employment and investment, tourism and property marketing. In this context, visitors become users/consumers: they usually reserve to the frame a rather superficial aesthetic/contemplative evaluation and they assess their experience mainly according to the quality of services offered by the administrators (Guarino et al. in press).



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The wildlife sanctuaries (“absolute zapovednost”) are an exception to this general trend and, as a wild context protected *erga omnes*, should be considered a positive example, although elitist and expensive, because they require intensive management (control of herbivores, biodiversity monitoring, etc.), which often clashes with the reluctance of administrators and public opinion to accept the non-usability of areas that, to retain their value, require costly maintenance and monitoring regimes (Sessions 1995).

A new concept of welfare

Beauty and harmony of nature, together with its efficiency, have inspired most speculative thinking and art forms that have marked human history. In the past, even human welfare was associated with a balanced and durable state of satisfaction, inspired by the ecological concept of alternative stable states. The *Ataraxia* of the Greeks, the *otium* of the Latins are expressions of a pleasure to be enjoyed noting wisely the satisfaction not of one’s own greed, but of one’s need.

Modern man has redefined the perception of welfare and simplified its semantic breadth: all parameters are set on the purchasing power of goods, products and services, that in many cases are necessary just because they are depicted as such by the new global socio-economic order. A paradigm for this change is the gradual shift from the theorization of a balanced welfare, inspired by the universal tendency of ecosystems to reach a steady state (Marsh 1864, Simberloff 1982), towards an incremental and bulimic welfare, no longer inspired by nature, but

fuelled by its devastation. In doing so, the speculative power of analytical thinking has been equally simplified and increasingly bound to the binary logic of cost/benefit analyses (Menegoni et al. 2011).

Cheap and pervasive information services broadcast this new concept of welfare, emphasizing in the popular imagination the gap between the “polluted” places of our everyday life and the “intact” places of protected areas. From this perspective, the wildlife sanctuary takes on a new meaning. It does not only matter for the rarity or the particular aspect of species and vegetation layers, but also for its value as an ethical model: a physical space where an efficient and optimal balance is established between the external factors (climate and soil) and the local communities (bacteria, plants, animals). This constitutes a living example of self-organized order, able to maintain and preserve in a steady state all the ecosystem functions which are needed also by the human species. The theorization of a balanced welfare, inspired by the universal tendency of ecosystems to reach a steady state, has to go along with the deflection from any economic greed.

About three centuries ago, natural philosophy and the natural sciences became separated and during the last century this gap inexorably divides ethics and science (Ellis 2002). Although affected by many problems, national parks and natural preserves are a rational answer to the current decline of biodiversity and as such they are widely accepted in our society. But the idea of “absolute zapovednost” is primarily an ethical need. It roots in many contribution to the ethical-philosophical debate,

within which, in addition to those mentioned by Boreiko et al. (2013), also Naess' principles of deep ecology and Schweitzer's reverence for life (*Erfurcht vor dem Leben*) are worthy of mention (Naess 1989; Schweitzer 1923).

The challenge of increasing the consensus around the "absolute zapovednost" goes far beyond the institution of protected areas: it lies in making desirable a sober lifestyle, aware of the environmental consequences of all our actions; it lies in making people able to see how gross it is to hoard without limits; how illusory it is to claim pre-emption over what, in reality, belongs to everyone; how vain it is to spend time just to satisfy needless needs, believing that this is the right way to escape from a status that looks like "poverty" to our blinded eyes.

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Concepts for Modern Management of Xeric Grasslands: between Nature Conservation and Agriculture, Criewen, Germany, 26-27 September 2013

Report from the conference organized by German-Polish Environmental Education and Meeting Center and Brandenburg Academy "Criewen Castle" in cooperation with the EDGG.

The conference took place in a beautiful old castle "Schloss Criewen", where the Brandenburg Academy, the National Park Foundation Lower Oder Valley, and also the administration of Brandenburg's only national park are located. It is nearby the Oder River with its extensive floodplains. The conference lasted for one and a half days with 16 presentations and short field visit to a bison pasture.

Several lectures gave country scale overviews of xeric grassland distribution, conservation status and management (e.g. Slovenia, Latvia, Greece, Hungary, Slovakia), whilst others presented specific experiences with best management regimes of dry grasslands. In additional contributions, the national park Lower Oder Valley was the center point, its rare and endangered plant communities, especially orchids and special protection and care measures.

It turned out that the most popular management type for xeric and xeromesic grasslands is grazing. For that purpose, mostly sheep are used, but also goats, horses and even bison. In Germany, there have been good results from grazing in combination with controlled burning. Pressure from mobile grazing is often less than grazing capacity, therefore burning of pasture is suggested under a 5-year rotation to avoid rapid shrub encroachment and to remove old biomass (litter). Nevertheless, it was shown that grazing alone is not sufficient to preserve whole biodiversity of dry grasslands. For example, Ch. Saure pointed out the needs of wild bee and wasp species associated with dry grasslands. When the main focus is wild insect diversity, then conservationists must be

sceptical of grazing, since such activity drastically hampers flowering. Other positive experiences are coming from Poland, where nature conservation organisations have acquired land for conservation purposes and manage them according to the needs of dry grassland habitats and species. EU subsidies (e.g. Rural Development Programme) and private funds, processing and selling of animal products (mainly sheep wool and meat) produces a substantial income. Several lecturers addressed the role of Rural Development Programmes (RDP) in supporting of dry grassland management. Such EU policy tools are considered highly valuable and topical discussions and debates among ministries and NGOs are taking place as the process of development of new RDPs for the next planning period 2014-2020 are still going on. Thus, examples from other countries of well established and successful measures for biodiversity management under the auspices of RDPs can help to convince ministries to prepare more effective agro-environmentally targeted measures.

The main conclusion was that only active conservation developed as self sustainable system can ensure maintenance of dry grasslands in a long-term run.

Abstracts and presentations from the Criewen conference can be found on EDGG homepage http://www.edgg.org/past_meet.htm.

Solvita Rūsiņa, Uta Böhme, Michael Vrahnakis



Participants of the conference and the grazed dry grassland site. Photo: U. Böhme

Open Landscapes 2013 – Ecology, Management and Nature Conservation, Hildesheim, Germany, 29th September - 3rd October 2013

The conference brought together almost 250 participants with an interest in open landscape habitats, from more than 25 countries. Approximately 18 sessions covered a wide range of topics, including ecological patterns and processes in both undisturbed and disturbed ecosystems; consequences of global change for biodiversity and/or ecosystem services; plant-animal relationships; tools and targets for ecosystem restoration and innovative strategies for nature conservation. As global change, ecosystem degradation and biodiversity loss are ongoing problems, one of the main goals of the conference was to find new conservation methods and alternative management tools to preserve open landscape habitats, such as heathlands, coastal ecosystems and dry meadows for future generations. In addition, participants discussed how open landscapes have developed in Europe, and what kind of role large herbivores have played in the past and what role do they play today.

The keynote speakers included Paul Keddy, Osvaldo Sala, Keith Edwards, Roland Bobbink, Michael Kleyer and Iris Möller.

The conference began with a social, ice-breaking event, prior to which there was an opportunity to participate in a guided tour of the city. The tour already gave some interesting insights into a city that was virtually destroyed during the WWII, apart from the impressive churches, of which the churches of St. Mary's and St. Michael constitute a UNESCO world heritage site. One of the most attractive features of the city is the historic market square, dominated by impressive mediaeval buildings. Even more remarkable was the fact that these "mediaeval" buildings were constructed in the 1980-1990s, as replicas of the original buildings that were lost during the war.

The scientific programme commenced with a keynote talk in a relaxed atmosphere, by Paul Keddy. Paul's research work has focused on the ecosystems of wetland open habitats, though in his presentation he introduced us to the research style of Alexander von Humboldt and encouraged his audience to adopt a conceptually broad-based approach. This was very appropriate, as the conference theme brought together a very diverse range of ecosystems and approaches, and many of us are more used to meetings based on relatively narrowly focused themes. The ecological impacts of disturbance were also a focal theme of Paul's presentation, which again is relevant to virtually all of the ecosystems we work with.

After Paul's keynote, the conference divided into four sets of parallel sessions on a variety of themes. There was also a rich provision of keynotes, three per day



Paul Keddy gave the opening keynote presentation of the conference. Photo: J. Dengler



Poster session (left) and the conference organizer Jasmin Mantilla Contreras (right). Photo: J. Dengler



*The conference venue, the University of Hildesheim.
Photo: J. Dengler*



Keith Kirby chatting with participants (including Laura Sutcliffe on the left) at the poster session. Photo: J. Dengler



*The final plenary presentation, given by Michael Kleyer.
Photo: J. Dengler*



*The conference dinner in the ballroom of Novotel, Hildesheim.
Photo: J. Dengler*

during the two days. Osvaldo Sala gave a thorough keynote presentation on the empirical study of productivity in grasslands and savannas. In the final keynote of day one, Iris Möller introduced us to the ecosystem services associated with coastal wetlands. Day two commenced with Roland Bobbink's keynote on the constraints for heathland restoration due to nitrogen deposition. The keynote presentation of Jan Lepš, which was much awaited by many, was unfortunately cancelled. In his place, Keith Edwards gave a talk on the restoration of salt marsh habitats in the Mississippi Delta, Louisiana. The final keynote presentation was that of Michael Kleyer, on the functional responses of plants to environmental gradients.

The conference closed with an open discussion on what we had learnt from the meeting, particularly on how researchers and NGOs could best advance the conservation of valuable open habitats. There was general agree-

ment on the need for interdisciplinarity and better cooperation and interaction with decision-makers, though less idea on how to initiate this. Maybe this challenge could be taken up at a subsequent OL conference.

A full Special Issue of the international journal *Hacquetia*, devoted to the main topics of the conference, which will be published early in 2015 (see page 6 of this bulletin). The conference was organized, in cooperation with the EDGG, SER-Europe, the Ecological Society of Germany, Austria & Switzerland (GfÖ) and NABU, by Jasmin Mantilla-Contreras and the Research Group Ecology & Environmental Education, from the University of Hildesheim. Hildesheim is also going to be the venue for the 44th Annual meeting of the GfÖ, on the topic "Integrating Ecological Knowledge into Nature Conservation and Ecosystem Management", from 8th to 12th September 2014. More information will be available soon at www.gfoe-2014.de.

*Jasmin Mantilla Contreras
Stephen Venn*



J. Dengler presents the European Dry Grassland Group to the audience of the Open Landscapes conference.

Conference proceedings “Steppe habitats of Europe”

The international conference “Steppe habitats of Europe - threat, conservation measures, and protection” took place in Erfurt (Thuringia, Germany) in June 2012. This conference was organized by the team of the LIFE+ project “Conservation and development of the steppe grasslands in Thuringia” (LIFE07 NAT/D/000213). (see EDGG Bulletin 13 (December 2011): 26-27). More than 170 participants from Germany, Austria, Switzerland, Hungary, Poland, Bulgaria, and Belgium discussed the present situation of steppe and other dry grassland types in Europe (see EDGG Bulletin 15 (June 2012): 25-27).

The conference volume “Steppe habitats of Europe - threat, conservation measures, and protection“ (edited by H. Baumbach & S. Pfützenreuter, published by the Thuringian Ministry of Agriculture, Forestry, Environment and Nature Conservation) is in print and will appear in the second half of December.

It contains 41 papers written by 82 authors, most of them EDGG members, from Austria, Belgium, Bulgaria, Finland, Germany, Greece, Hungary, Latvia, Poland, Romania, Russia, Slovakia, Switzerland, and Ukraine. Ten papers are in English language and all papers have an English and a German abstract. The hard cover volume has 456 full coloured pages.

The main topics are shaped by seven chapters:

- I) The distribution of steppe habitats and steppe relic species in Europe in a chorological, ecological and vegetation history context;
- II) Steppe areas in Germany, Austria, and Switzerland;
- III) Steppe areas in Southeastern and Eastern Europe;
- IV) The LIFE project “Conservation and development of the steppe grasslands in Thuringia” (2009-2014);
- V) Further projects for the long-term protection of steppe and dry grasslands in the European Union;
- VI) Conservation measures for endangered steppe plants;
- VII) Initiatives for the conservation and research of grassland ecosystems.

The conference volume (hard-copy and CD) can be ordered free of charge from the project office (postal address see below). Please send us an e-mail to poststelle@steppenrasen.thueringen.de.

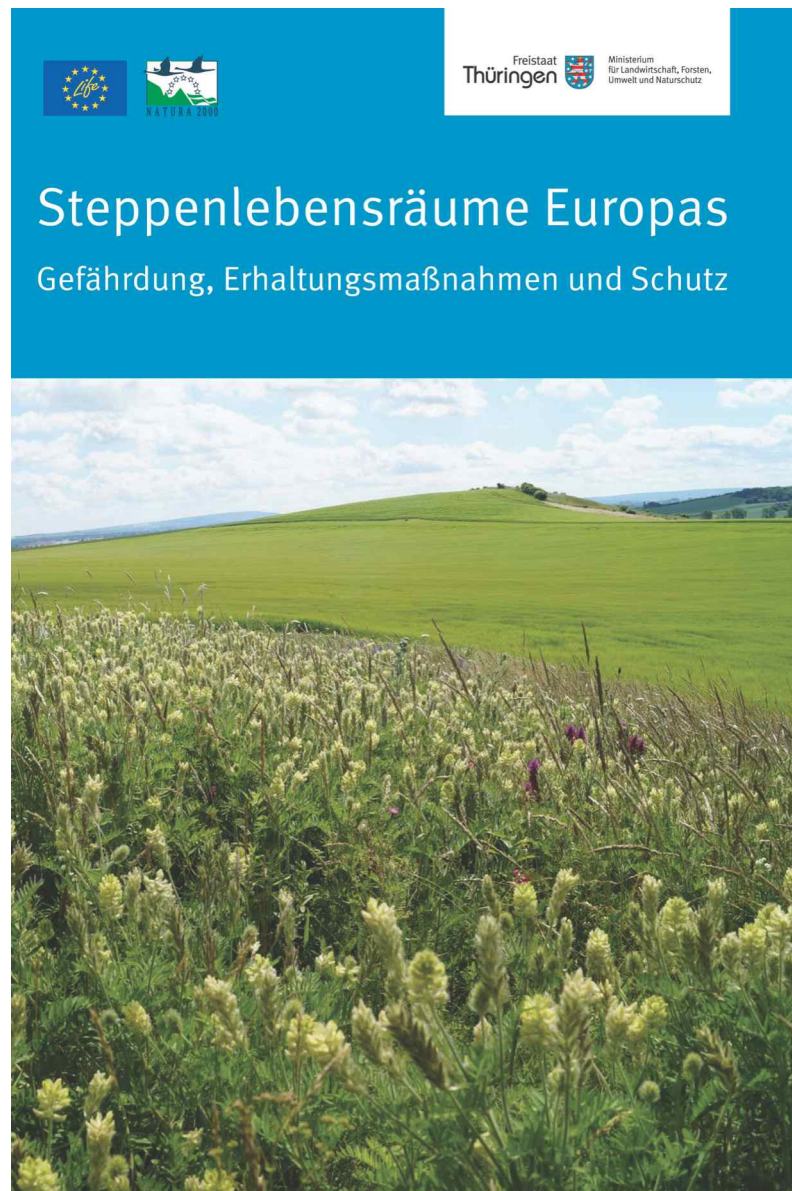
Henryk Baumbach

Reference

Baumbach, H. & Pfützenreuter, S. (Ed.), 2013: Steppenlebensräume Europas – Gefährdung, Erhaltungsmaßnahmen und Schutz [Steppe habitats of Europe - threat, conservation measures, and protection]. Conference proceedings, published by the Thuringian Ministry of Agriculture, Forestry, Environment and Nature Conservation (TMLFUN), Erfurt, 456 p. ISBN 978-3-00-044248-3

Contact: Dr. Henryk Baumbach, Project manager, LIFE-Projektbüro des Thüringer Ministeriums für Landwirtschaft, Forsten, Umwelt und Naturschutz (TMLFUN), Uhlandstraße 3, 99610 Sömmerda, Germany.

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Proceedings of the 9th EDGM in Prespa

Time flies... After the 9th European Dry Grassland Meeting (EDGM) in Prespa (19-23 May 2012) another successful meeting was held in Zamosc (Poland) and there is the upcoming meeting in Tula (Russia), next June... It is widely acknowledged that all these EDGMs offer fertile ground for fresh scientific ideas to start rooting and producing more. All of us EDGM members consider the EDGM as invaluable and most productive events of our year!

Apart from the EDGM, the 9th EDGM of Prespa (Greece) was co-organized by the Hellenic Rangeland and Pasture Society (HERPAS, www.elet.gr), which is a quite active national organization for dry grassland conservation and protection. The theme of the 9th EDGM was Dry Grasslands of Europe: Grazing and Ecosystem Services, and the contributions were organized into four (4) sessions: (I) Grazing impact on biotic elements, (II) Grazing impact on abiotic elements, (III) Ecology and management of dry grasslands, (IV) Grassland and rural societies. In total 123 papers (101 posters and 22 oral presentations) by 307 authors coming from 28 different countries (Greece, Armenia, Australia, Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Germany, Denmark, Sweden, Spain, Finland, United Kingdom, Hungary, Ireland, Iran, Italy, Japan, Kazakhstan, Poland, Romania, Russia, Slovakia, Slovenia, Turkey, Ukraine, and USA) were presented. The main product of the conference was the publication of the homonymous Book of Proceedings (ISBN 978-960-86416-5-5).

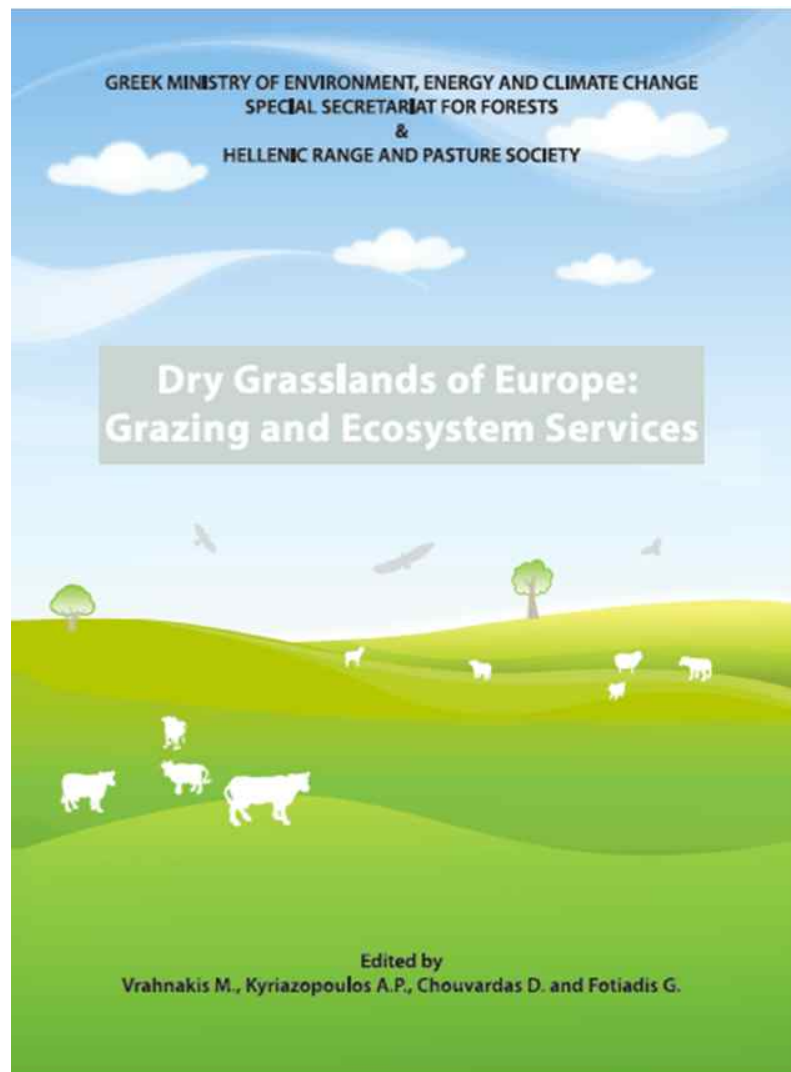
The volume is an effort to publicize and promote further the significant values and ecosystem services provided by the European dry grasslands. Controlled livestock grazing appeared to be the major vendor of these values and services. The first part of the volume is dedicated to the impact of grazing on the biotic environment and the role grazing plays on herbage production and quality, representative species of wild fauna, vegetation structure, spatial distribution, historical changes, and floristic diversity. The impact of grazing on elements of the abiotic environment, like soil and landscape properties, land productivity, and carbon sequestration is the focus of the second part of the volume. The largest part of the volume is the third one dedicated to ecology and management of dry grasslands; among others vegetation and ecological characteristics from dry grasslands of various places of Europe are presented, various impacts of wildfires, mycorrhiza formation, faunal and floristic diversity are investigated, and phytosociological identi-

ties and habitat-type statuses are presented. Finally, life quality, landscape historical evolution, infrastructure development, environment-friendly livestock production systems, proposals for sustainable rural development i.e. the tight links of local societies and European dry grasslands is the focus of the last part of the volume.

The publication of the volume was accomplished with the help of the Greek Ministry of Environment, Energy and Climate Change and the HERPAS.

The Book is available in its electronic form through the web page of HERPAS (http://www.elet.gr/pages/wp-content/uploads/Dry-Grasslands-of-Europe_Grazing-and-Ecosystem-Services.pdf). The hardcopy of the book costs 10 Euros (plus shipping costs). It can be ordered from the member of EDGM and HERPAS Dr. Dimitrios Chouvardas (xouv@for.auth.gr).

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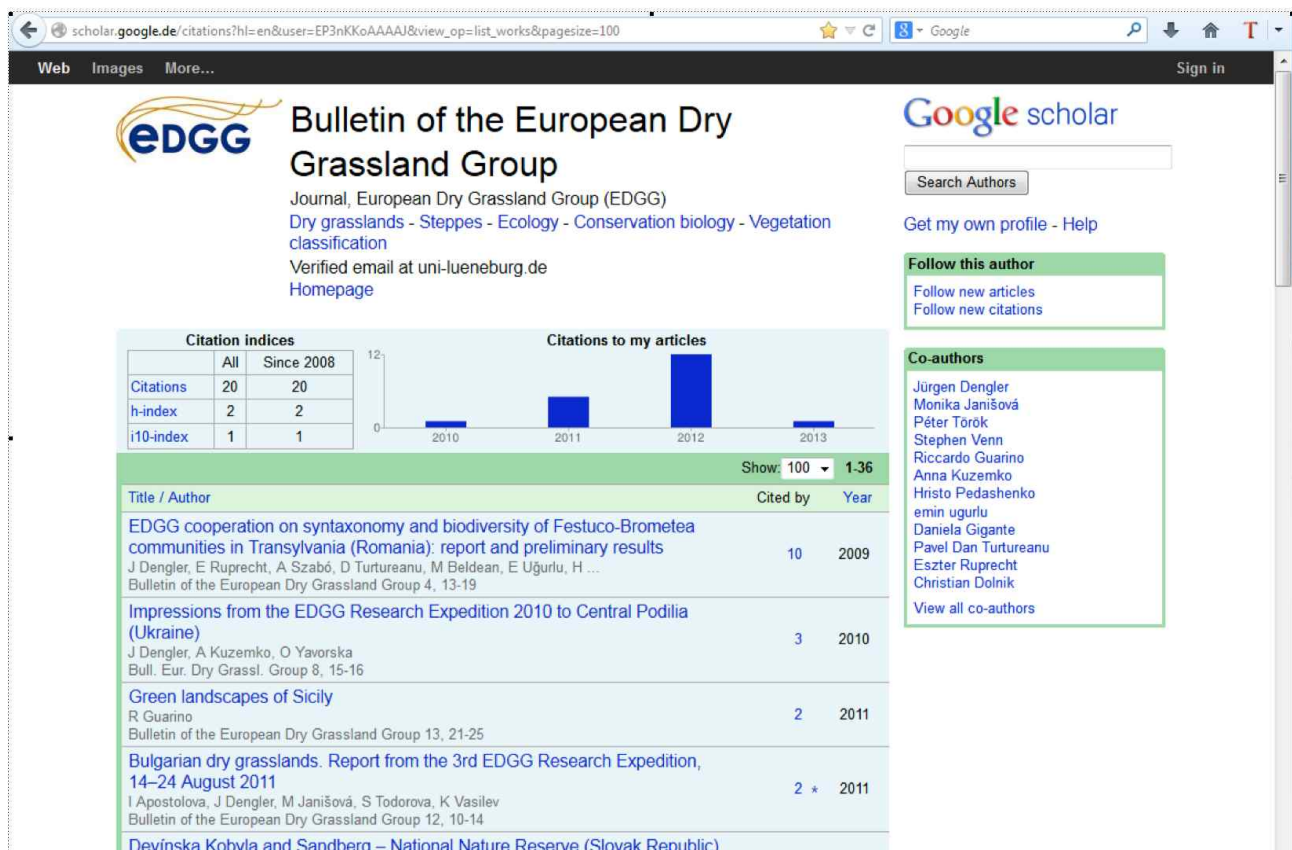


Figure 1: Screenshot of the new Google Scholar citation profile of the Bull. Eur. Dry Grassl. Group (as of 28 August 2013)

Book reviews

Here we present recently published books that might be relevant for grassland scientists and conservationists, both specific grassland titles as well as faunas, floras, or general books on ecology and conservation biology. If you (as an author, editor or publisher) would like to propose a certain title for review, or if you (as an EDGG member) would like to write a review (or reviews in general), please contact the Book Review Editor (dengler@botanik.uni-hamburg.de).

Frey, W. (2009) [Ed.]: Syllabus of Plant Families – Adolf Engler’s Syllabus der Pflanzenfamilien. Part 3: Bryophytes and seedless Vascular Plants. 13th ed., IX + 419 pp., Borntraeger, Berlin. Price: 89,00 € (hardcover). ISBN 978-3-443-01063-9

Half a century ago, the 12th edition of Adolf Engler’s well-known “Syllabus der Pflanzenfamilien” was published in two volumes, like all previous editions, still in German. At that time, this was a kind of global standard for plant taxonomy in general. It subsequently became almost forgotten, while during the past 20 years mainly molecular-genetic methods have dramatically reshaped our vision of the relationships between the living species of the globe. Nobody else seriously attempted such a comprehensive and consistent treatment as Engler’s across all groups traditionally covered by botanists (i.e. including algae, fungi and even cyanobacteria), while there are various such volumes or series for angiosperms or vascular plants.

With this in mind, the restart of a 13th edition of the Syllabus after such a long time is highly appreciated. Now in English and planned for five volumes, the editor and publisher at the same time stick to the traditional and convincing concept of a series that was founded more than a century ago (1st ed. 1892) but incorporate the newest knowledge from genetic, morphological and biochemical research. Every family and higher taxon is presented in a standardised way, accompanied with many black-and-white drawings and microphotographs. Within the families, all extant and fossil genera are listed, each with the number of currently known species given.

The first volume of the 13th edition to appear has been written by W. Frey, M. Stech and E. Fischer, and comprises the traditional phyla *Bryophyta* (bryophytes) and *Pteridophyta* (fern and fern-allies). However, already the Introduction and the first chapter on the “Subkingdom *Embryobionta*” make clear that neither of these two “taxa” is monophyletic, while indeed together with the *Spermatophyta* (seed plants), they form a strongly supported phylogenetic group, from which first the *Marchantiophyta*, then the *Bryophyta* s.str. branched off, while the

Anthcerotophyta (hornworts) are actually the sister clade of all vascular plants. The novelties continue in the lower ranks and are translated into a proper taxonomic classification, supported throughout by extensive and up-to-date reference lists. It is to be hoped that also the other four volumes will appear in the near future!

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Wolfgang Frey (Editor)

Syllabus of Plant Families

13th ed.

A. Engler’s Syllabus der Pflanzenfamilien

3 Bryophytes and seedless Vascular Plants



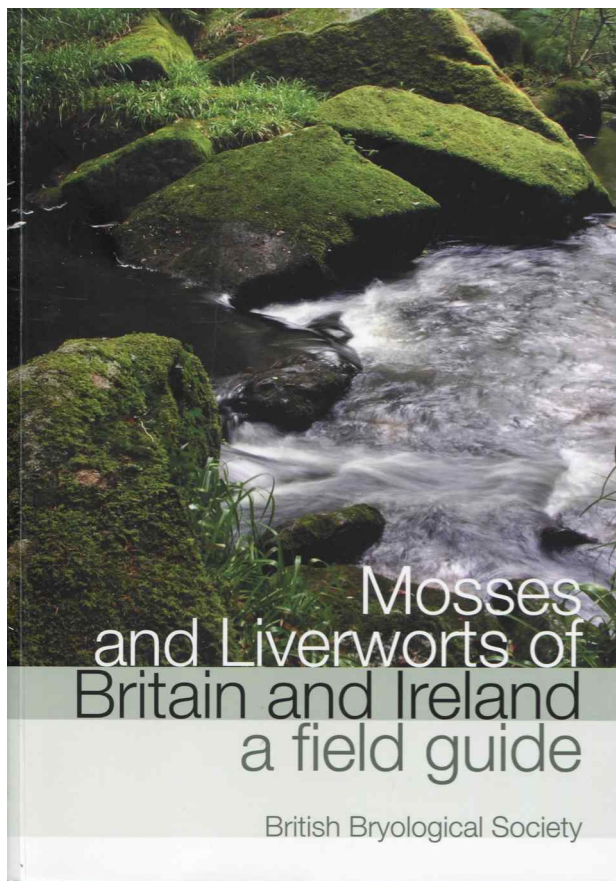
Atherton, I., Bosanquet, S., Lawley, M. (2010) [Eds.]: **Mosses and liverworts of Britain and Ireland: a field guide**. V + 848 pp., British Bryological Society, Plymouth. ISBN 978-0-9561310-1-0 (paperback). Price: 25.95 GBP.

Order from: http://rbg-web2.rbge.org.uk/bbs/Activities/Field_Guide_order.htm.

Bryophytes are a major component of the biodiversity in dry grasslands (e.g. Dengler 2005, Jeschke & Kiehl 2006, Löbel & Dengler 2008, Boch & Dengler 2008), yet they are often not considered in vegetation studies of dry grasslands because researchers deem their determination too complicated. Indeed, getting to know bryophyte species requires the use of a microscope, and some critical taxa can only be determined safely using high magnification. However, after one becomes accustomed to bryophytes, actually many species can be easily recognised in the field with the naked eye or using a hand lens only.

This field guide covers about 750 of the c. 1070 taxa of mosses, liverworts and hornworts occurring on the British Isles, single-page descriptions. These consist in the upper half of one to several colour photos that show the habitus and possibly some details (such as capsules, leaf margins), always with a scale bar, often some additional black-and-white drawings of further relevant determination details, and a gridded distribution map. The photos in most cases are of good quality and really convey how the species look in the field. There are only a few instances where the photo is insufficient, e.g. the completely unsharp representation of *Timmia austriaca*, but this is probably because the authors insisted in using photos from Britain, where this species is extremely rare. The text in the lower part is always structured into “Identification”, “Similar species” and “Habitat”, in which the former gives a helpful description, focussing on characters of the habitus or those recognisable with a 20x hand lens. Under “Similar species”, the differential characters towards other species covered in the book, as well as to those very rare or determination-critical taxa not presented with a full treatment, are given. There is also a dichotomous “field key” to the “commoner and/or distinctive” species (50 pp.) but, except perhaps for *Sphagnum* (not relevant in dry grasslands), it is questionable whether it is effective to key-out a species in the field. Users will more likely compare the photos and descriptions of the best-matching species, and if this does not yield a clear result, the only solution is to take a sample, and identify it at home using a microscope and a comprehensive key.

In conclusion, if a bryologist is to carry a book into the field, this is clearly the best choice, not only in Britain and Ireland, but throughout temperate Europe. Only in the arctic-boreal and Mediterranean zones does the book reach its limits, while even there the majority of the bryoflora is included. The BBS is to be applauded for having produced this full-colour book with water-proof jacket for such a reasonable price.



- Boch, S., Dengler, J. (2006): Floristische und ökologische Charakterisierung sowie Phytodiversität der Trockenrasen auf der Insel Saaremaa (Estland). In: Bültmann, H., Fartmann, T., Hasse, T. [Eds.]: Trockenrasen auf unterschiedlichen Betrachtungsebenen – Berichte einer Tagung vom 26.–28. August in Münster. Arb. Inst. Landschaftsökol. Münster 15: 55–71, Münster.
- Dengler, J. (2005): Zwischen Estland und Portugal – Gemeinsamkeiten und Unterschiede der Phytodiversitätsmuster europäischer Trockenrasen. Tuexenia 25: 387–405.
- Jeschke, M., Kiehl, K. (2006): Auswirkung von Renaturierungs- und Pflegemaßnahmen auf die Artenzusammensetzung und Artendiversität von Gefäßpflanzen und Kryptogamen in neu angelegten Kalkmagerrasen. Tuexenia 26: 223–242.
- Löbel, S., Dengler, J. (2008) [“2007”]: Dry grassland communities on southern Öland: phytosociology, ecology, and diversity. In: van der Maarel, E. [Ed.]: Structure and dynamics of alvar vegetation on Öland and some related dry grasslands – Dedicated to Ejvind Rosén on his 65th birthday. Acta Phytogeogr. Suec. 88: 13–31, Svenska Växtgeografiska Sällskapet, Uppsala.

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Werger, M.J.A., van Staalduinen, M.A. (2012) [Eds.]: **Eurasian steppes. Ecological problems and livelihoods in a changing world (= Plant and Vegetation 6). XVI + 565 pp., Springer, Dordrecht. ISBN 978-94-007-3885-0. Price: 181.85 € (hardback) or 142.79 € (eBook).**

According to its Bylaws, the EDGG deals both with semi-natural dry grasslands in Europe and the natural steppes of the Palaearctic biogeographic realm. Apart from some natural stands in Northern Africa, the natural steppes cover an extensive area of land from Ukraine in the West to Mongolia and China in the East, with perhaps 10 million km² in total (Dengler et al. 2014). Despite being one of the largest biomes of the world, information on the biodiversity and conservation of Eurasian steppes has largely been restricted to regional journals in Russian, Ukrainian, Kazakh, Mongolian or Turkish. Thus they can hardly be considered as being accessible to the international scientific community. Therefore, the efforts of the two Dutch editors to compile a recent overview of knowledge are highly laudable. Marinus Werger and Marja van Staalduinen did a tremendous job in bringing together nearly 60 renowned steppe researchers from all over Eurasia. The 21 chapters are organized into four major parts.

The first part (9 chapters, 286 pp.) is devoted to the natural history of the steppe regions. The detailed and competent treatise of the central Asian steppes (here basically referring to those located in China and Mongolia) by Wesche & Treiber starts with the physical and biogeographical background, then elaborates on abiotic and anthropogenic drivers of species composition and productivity. Chapter 2, on the Russian steppes (both in Europe and Asia) by Smelansky & Tishkov, provides a good overview about their spatial distribution, to what extent they are protected in various types of conservation areas and how they are affected by land use and land use change. Rachkovskaya & Bragina firstly present a detailed phytogeographic regionalisation and vegetation typology for the Kazakh steppes, before they explain about regional agricultural use and conservation. For the Central Anatolian steppes, Kürschner & Parolly provide a physico-geographical introduction, publish a syntaxonomic overview and illustrate how land use changes have affected the steppes (e.g. transformation of rangelands into arable land to a significant extent). In the Ukraine, as the last region of natural steppes presented, Korotchenko & Peregrym report that compared to the other mentioned countries, the steppes have been destroyed to the greatest extent, with only c. 3% of their original area remaining. The four other chapters refer to European countries outside the steppe biome, namely Spain, Hungary, Slovakia and Romania. While the authors of the chapters on the first two steppe regions argue that the steppes there are at least partly natural, in the two remaining countries it is clear that steppe-like dry grasslands are of a secondary nature. This, however, does not diminish the value of these chapters in the context of the book.

Part II is entitled “Degradation” and contains two different categories of contributions. The first two papers are appropriate to the title, Bazha et al. reporting on the degradation of Mongolian steppes through overgrazing and Dong et al. on restoration measures in “desertified”

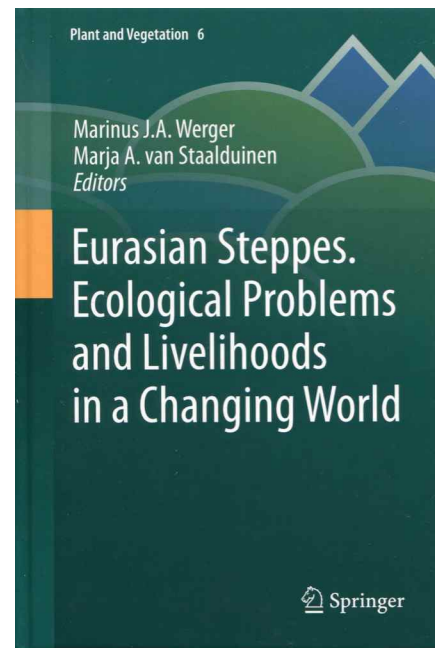
steppes of China. The two following articles, by contrast, deal with the conservation of two of the eminent big herbivores of the Eurasian steppe, Nero-nov et al. on the population development of the saiga antelope (*Saiga tatarica*) and Wit et al. on a re-introduction project for the Przewalski horse (*Equus przewalskii*) in

Mongolia. Part III presents four articles from different regions on the effect that climate change has now, and the effect it is likely to have in the future, on the steppe ecosystems. Climate change might have a particularly dramatic effects on the steppe types developed over permafrost, but according to the contribution of Sharkhuu & Sharkhuu, the effect of increased air temperature hardly affected the frozen ground, due to the buffer capacities of the vegetation, but overgrazing might accelerate the melting process. Finally, part IV looks into the livelihoods of the local people, mostly nomads and herdsmen, and how their lives are connected to the conservation of steppes.

All in all, this is a well compiled, readable book with a wealth of information. As an edited volume that consists of independent contributions from various authors with different perspectives, everything does not always match in style of presentation, line of reasoning and applied terminology. However, the publishing house is certainly right when it claims in the Internet that “there is no other book in which so much expert knowledge on change in steppe ecology, changes in steppe land use, and changes in the livelihoods of steppe inhabitants have been integrated”. Having brought all these researchers from the numerous countries together in one volume, this can certainly be a major step towards a more consistent and integrated approach in the future. The presentation is very pleasant, with many coloured photos and maps, well-structured tables and diagrams. The only disappointing aspect is the excessively high price. While this appears already too high for western European standards, it is clearly prohibitive in the “home countries” of the steppe biome, making this book largely inaccessible to the major part of its potential readership. This is a real pity!

Dengler, J., Janišová, M., Török, P., Wellstein, C. (2014): Biodiversity of Palaearctic grasslands: a synthesis. Agric. Ecosyst. Environ. (in press).

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Recent publications of our members

With this section, the contents of which will also be made available via our homepage, we want to facilitate an overview of **dry grassland-related publications** throughout Europe and to improve their accessibility. You are invited to send lists of such papers from the last three years following the style below to monika.janisova@gmail.com and rusina@lu.lv. We will include your e-mail address so that readers can request a pdf. For authors who own full copy-right, we can also post a pdf on the EDGG homepage. As we plan to publish a book about the European dry grasslands at some point in the future, under the auspices of the EDGG, we would appreciate if you could send a pdf (or offprint) of each of your dry grassland publications to juergen.dengler@uni-bayreuth.de.

- Hobohm, C. [Ed.]: Endemism in Vascular Plants. Springer, Dordrecht, 348 pp. ISBN 978-94-007-6912-0.
- Jandt, U., Becker, T., Dengler, J. (2013): Dry grasslands of Germany – call to support an initiative for a consistent, plot-based classification. In: Baumbach, H., Pfützenreuter, S. [Eds.]: Steppenlebensräume Europas – Gefährdung, Erhaltungsmaßnahmen und Schutz: pp. 435–440. Thüringer Ministerium für Landwirtschaft, Forsten, Umwelt und Naturschutz, Erfurt.
- Kelemen A., Török P., Valkó O., Miglécz T., Tóthmérész B. (2013): Mechanisms shaping plant biomass and species richness: plant strategies and litter effect in alkali and loess grasslands. *Journal of Vegetation Science* 24: 1195-1023.
- Kunze, W. (2013): Artenförderung durch technische Gestaltung der Habitate - Neue Wege für den Artenschutz. *Entomologie heute* 25: 161-192.
- Miglécz T., Tóthmérész B., Valkó O., Kelemen A., Török P. (2013): Effects of litter on seedling establishment: an indoor experiment with short-lived Brassicaceae species. *Plant Ecology* 214: 189–193.
- Mücke W., Deák B., Schroiff A., Hollaus M., Pfeifer N. (2013): Estimation of dead wood using small footprint airborne laser scanning data. *Canadian Journal of Remote Sensing* 39. doi: 10.5589/m13-013
- Pipenbaher, N., Kaligarič, M., Mason, N. W. H. & Škornik, S. (2013): Dry calcareous grasslands from two neighboring biogeographic regions: relationship between plant traits and rarity. *Biodivers. conserv.* 22: 2207-2221.
- Škornik, S., Vidrih, M., Kaligarič, M. (2010): The effect of grazing pressure on species richness, composition and productivity in North Adriatic Karst pastures. *Plant Biosyst.* 144: 355-364.
- Török P., Miglécz T., Valkó O., Tóth K., Kelemen A., Albert Á., Matus G., Molnár V.A., Ruprecht E., Papp L., Deák B., Horváth O., Takács A., Hüse B., Tóthmérész B. (2013): Seed weights support Social Behaviour Types – Analysis and new thousand seed weight records of the Pannonian flora. *Acta Botanica Hungarica* 55: 429–472.
- Turtureanu, P.D., Dengler, J. (2013): Patterns of floristic diversity in forest openings of the Trascău Mountains (Southeastern Carpathians). *Acta Biologica Cracoviensia, Series Botanica* 55 (Suppl. 1): 34–34.
- Valkó O., Török P., Deák B., Tóthmérész B. (2013): Prospects and limitations of prescribed burning as a management tool in European grasslands. Review paper, *Basic and Applied Ecology* doi: 10.1016/j.baae.2013.11.002
- Vrahnakis, M.S., Janišová, M., Růsiņa, S., Török, P., Venn, S., Dengler, J. (2013): The European Dry Grassland Group (EDGG): stewarding Europe's most diverse habitat type. In: Baumbach, H., Pfützenreuter, S. [Eds.]: Steppenlebensräume Europas – Gefährdung, Erhaltungsmaßnahmen und Schutz: pp. 417–434, Thüringer Ministerium für Landwirtschaft, Forsten, Umwelt und Naturschutz, Erfurt.

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Forum

Announcements from members to members

Research stays in Germany

Young grassland ecologists who are interested in a research stay in Germany to collaborate with me and other members of the **Disturbance Ecology Research Group of the University of Bayreuth** are welcome to contact me to explore potential topics for collaboration and applicable funding sources. Preferred themes for a research stay are:

- **Large-scale analyses of the grassland data in the European Vegetation Archive (EVA)**, such as pan-European biodiversity analyses, parameterization of grassland types/syntaxa or consistent large-scale re-classification of certain grassland types (such work should include helping with to integrate more plot data from underrepresented regions);
- **Analyses using the EDGG Expedition data;**
- **Cooperations within the framework of the BiodivERsA project SIGNAL** (global-change experiments in grasslands along a pan-European gradient, see <http://www.bayceer.uni-bayreuth.de/signal/>);
- other topic in disturbance ecology and grassland ecology are also possible under certain circumstances.

Funding options include:

- **DAAD scholarships** of variable length for researchers at any level worldwide (see <https://www.daad.de/deutschland/en/>): there is usually only one application deadline per country and year;
- **DBU scholarships** of 6–12 months for young researchers (up to 3 years after finalisation of the MSc) from Eastern European countries (see <http://www.dbu.de/963.html>): there is one application deadline per year, depending on country, mostly between 1 February and 1 March;
- **Humboldt Research Fellowships for Postdoctoral Researchers** worldwide (maximum 4 years after PhD) of 6–24 months length (see <http://www.humboldt-foundation.de/web/humboldt-fellowship-postdoc.html>): no application deadline
- **Humboldt Research Fellowships for Experienced Researchers** worldwide (5–12 years after PhD) of 6–18 months length (can be divided in up to three stays) (see <http://www.humboldt-foundation.de/web/humboldt-fellowship-experienced.html>): no application deadline.

Jürgen Dengler (juergen.dengler@uni-bayreuth.de)



Forhcoming events

13th Meeting on Vegetation Databases

Vegetation databases and ecological restoration

24–26 February, Koblenz, Germany

http://www.botanik.uni-greifswald.de/vegdb_meeting_2014.html

Deadline for registration: 13 December 2013

8th Meeting of the Specialist Group for Macroecology of the GfÖ

Integrating mechanisms into macroecology

4–6 March 2014, Halle (Saale), Germany

<http://www.macroecology.org/>

Deadline for registration: 1 February 2014

3rd Symposium On Biology of Rare and Endemic Plant Species

19–23 April 2014, Antalya, Turkey

Contact: www.biorare.net

Deadline for abstracts: 6 January 2014

Early registration deadline: 15 March 2014

23th Workshop of European Vegetation Survey (EVS)

8–12 May 2014, Ljubljana, Slovenia

Daedline for registration: 15 december 2013

Contact: eurovegmembership@gmail.com

<http://evs.zrc-sazu.si/>

11th European Dry Grassland Meeting (EDGM)

Steppes and Semi-natural Dry Grasslands: Ecology, Transformation and restoration

5–15 June 2014, Tula, Russia

Registration is open at http://www.edgg.org/edgg_meeting_2014.html

7th EDGG Field Workshop to Navarre, Spain

15–24 June 2014

Coordinators: Idoia Biurrun (idoia.biurrun@ehu.es) and Jürgen Dengler (juergen.dengler@uni-hamburg.de)

Deadline for registration: 31 January 2014

57th Symposium of the I. Association for Vegetation Science (IAVS)

Vegetation patterns and their underlying processes

1–5 September 2014, Perth, Australia

Official registration opens on 10 February 2014

Contact: <http://www.iavs2014.com>

Conference of the European Grassland Federation (EGF)

EGF at 50: the future of European Grasslands

7–11 September 2014, Aberysthwyth, UK

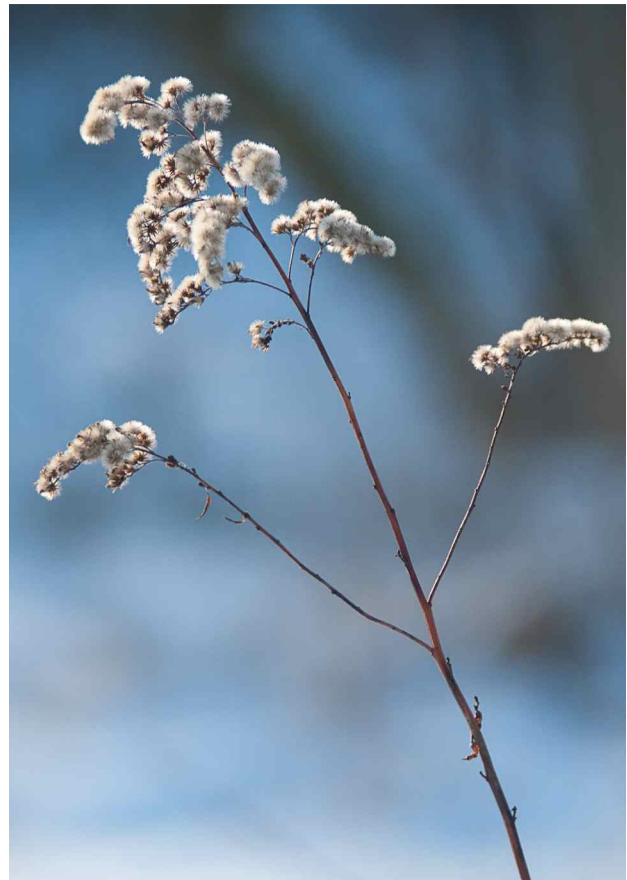
<http://www.egf2014.org/>

Deadline: 6 January 2014

Annual Conference of the GfÖ

Integrating Ecological Knowledge into Nature Conservation and Ecosystem Management

8–12 September 2014, Hildesheim, Germany



Annual Meeting of the British Ecological Society (BES) and the Société Française d'Ecologie (sfe)

9–12 December 2014, Lille, France

http://www.britishecologicalsociety.org/events/current_future_meetings/2014-annual-meeting/

Biennial Meeting of the International Biogeography Society (IBS)

9–12 January 2015, Bayreuth, Germany

<http://biogeography.blogspot.de/2013/07/call-for-symposia-and-workshop.html>

58th Symposium of the I. Association for Vegetation Science (IAVS)

19–24 July 2015, Brno, Czech Republic

The 4th European Congress for Conservation Biology and 27th International Congress for Conservation Biology

3–6 August 2015, Montpellier, France

Contact: <http://www.iccb-eccb2015.org/ECCB>

59th Symposium of the I. Association for Vegetation Science (IAVS)

30 May - 3 June, Pirenópolis 2016, Brazil

The European Carabidologists' Meeting XVII

20–25 September 2016, Croatia



Photo: J. Dengler

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Important dates: *The deadline for Bulletin 22 is 20 February 2014*

Bulletin 22 to appear: March 2014

Bulletin 23 to appear: June 2014