

of the European Dry Grassland Group



Introduction

This winter issue includes many news on plenty of activities of the EDGG. We hope you will find them interesting. We also would like to thank you for support and help. We wish you peaceful Christmas time and happy New Year.

Monika Janišová & members of EDGG Executive Committee

Content

European Dry Grassland Group	2
Results of the elections to the EDGG Executive Committee 2011–2013	3
Members of the new EDGG Executive Committee	4
Overview of EDGG Subgroups	7
New Topical Subgroup Grassland Conservation and Restoration	8
Grassland Questionnaire of the EVS	9
Questionnaire - Application of prescribed burning in European grasslands	9
Activities of the European Dry Grassland Group	11
News from policy-related activities of the Special Policy Committee (SPC-EDGG)	13
4th EDGG research expedition to Sicily, March-April 2012	16
Green landscapes of Sicily	21
International conference “Steppe habitats of Europe”, Erfurt, June 2012	26
The LIFE+-Project „Conservation and development of the steppe grasslands in Thuringia“	26
Recent publications of our members	27
Book reviews	28
Forthcoming events	31

Picture left: Green landscape of Sicily. Photo: R. Guarino.

December 2011

EDGG homepage: <http://www.edgg.org>

European Dry Grassland Group

The European Dry Grassland Group (EDGG) is a network of dry grassland researchers and conservationists in Europe. EDGG is a Working Group of the International Association for Vegetation Science (IAVS). EDGG is supported by the Floristisch-soziologische Arbeitsgemeinschaft.

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 facilities for the information exchange among dry grassland researchers and conservationists:

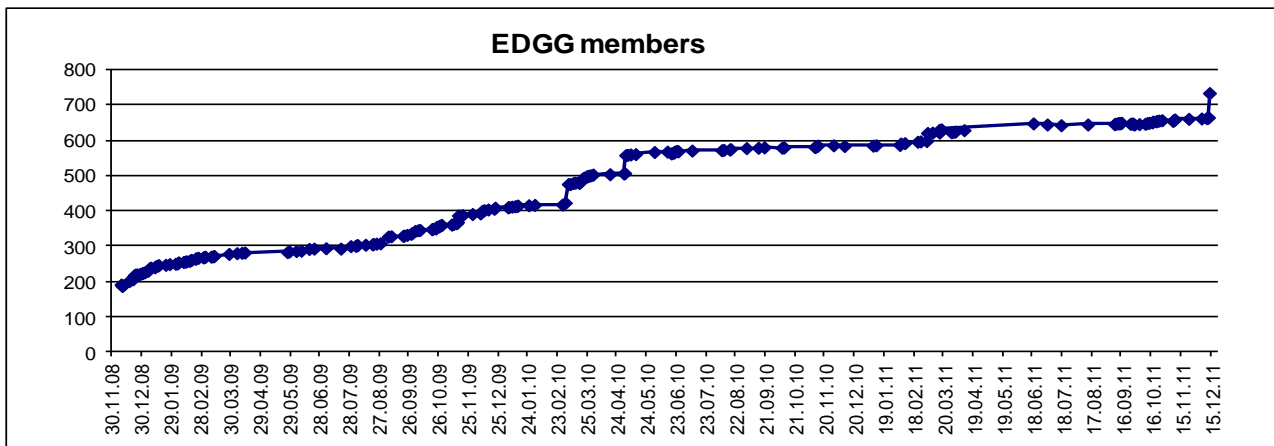
- ♠ the **Bulletin of the EDGG** (published quarterly);
- ♠ the **EDGG homepage** (www.edgg.org);
- ♠ e-mails via our **mailing list** on urgent issues;
- ♠ the **European Dry Grassland Meetings**, organized annually in different places throughout Europe.
- ♠ **EDGG research expeditions** to sample baseline 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. biologists.

Everybody can join EDGG without any fee or other obligation. To become a member of the European dry grassland Group or its subordinate units write an e-mail to Jürgen Dengler including your complete address and specifying which of the groups you want to join. The detailed information you can find at: http://www.edgg.org/about_us.htm.

Membership development

The number of EDGG members continued to grow constantly. As of 15 December 2011 we had 734 members from 51 countries. The highest numbers of members were from Germany (192), Greece (89), Italy (35), Ukraine (34), Slovakia (32), and Spain (30). By contrast, the highest density of EDGG members among 1,000,000 million inhabitants is found in Greece (8.1), Estonia (7.4), Slovakia (5.9), Slovenia (4.5), and Luxembourg (4.4).



Results of the elections to the EDGG Executive Committee 2011–2013

The elections to the EDGG Executive Committee (EC) took place from 3 November to 3 December via electronic ballot. There were six candidates for the up to seven positions to be filled. A total of 71 EDGG members cast their votes, with the following results:

Monika Janišová: 62 votes

Jürgen Dengler: 61 votes

Solvita Rūsiņa: 58 votes

Stephen Venn: 53 votes

Michael Vrahnakis: 50 votes

Péter Török: 49 votes

As each of the candidates received between 69% and 87% of the votes and thus clearly more than the 50% required by the Bylaws, all six are elected members of the EDGG-EC for 2011–2013. Their terms of duty will end with the General Assembly at the European Dry Grassland Meeting 2013.

Assignment of responsibilities in the Executive Committee

The EDGG-EC is the primary governing body of EDGG, and all six members (Co-Chairs) have equal rights in representing EDGG internally and externally. Following the EDGG Bylaws, we have assigned the six required and several optional responsibilities among the EDGG-EC members:

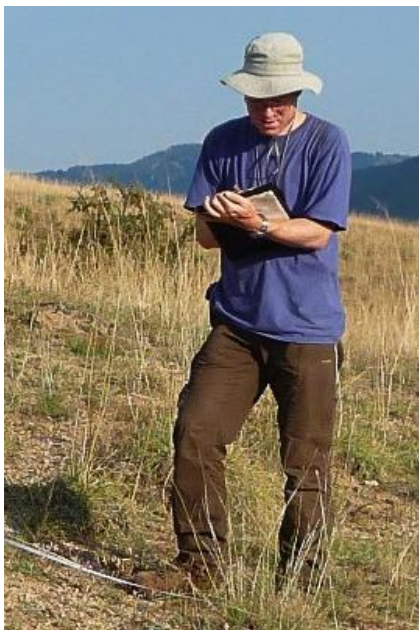
Additionally, the EDGG-EC appointed a **special committee for the science-policy interface (named Special Policy Committee – SPC)** according to Article 7.3 of the Bylaws for the period 2011–2013, with Mike Vrahnakis (Officer), Péter Török (Deputy-Officer), Steve Venn (member), Ilya Smelanski (member) and Laura Sutcliffe (member). For further information, see pages 13–15 in this Bulletin.

	Officer	Deputy-Officer
Main responsibilities (BYLAWS)		
Membership Administrator	Jürgen Dengler	
Secretary-General	Steve Venn	Péter Török
Editor-in-Chief of the Bulletin of the EDGG	Monika Janišová	
Editor-in-Chief of the EDGG homepage (incl. other electronic media)	Solvita Rusina	Steve Venn
Meetings Coordinator	Mike Vrahnakis	Monika Janišová
Representative towards IAVS	Jürgen Dengler	Monika Janišová
Additional responsibilities (OPTIONAL)		
Officer of the Special Policy Committee (SPC)	Mike Vrahnakis	Péter Török
Coordinator for Special Features	Jürgen Dengler	
Coordinator for EDGG Expeditions	Jürgen Dengler	
Book Review Editor	Jürgen Dengler	
Contact Officer to other organisations	Péter Török	Jürgen Dengler



Atractylis cancellata L. Photo: R. Guarino.

Members of the new EDGG Executive Committee



Jürgen Dengler

Responsibilities in the EDGG-EC: Membership Administrator, Representative towards IAVS, Coordinator for Special Features, Coordinator for EDGG Expeditions, Book Review Editor, Deputy Contact Officer to other organisations.

Contact: Biodiversity, Evolution and Ecology of Plants, Biocentre Klein Flottbek and Botanical Garden, University of Hamburg, Ohnhorststr. 18, 22609 Hamburg, Germany.

Phone (university): +49-40-42816-403; Fax: +49-40-42816-539;

Phone (private): +49-4131-2195046

E-mail: dengler@botanik.uni-hamburg.de

Personal homepage: http://www.biologie.uni-hamburg.de/bzf/fbha063/fbha063_e.htm

Professional profile: Jürgen has a Diplom degree in Biology (Botany) and a PhD in Biology (Ecology), both from the University of Kiel, and has recently submitted his Habilitation thesis in Vegetation Ecology and Mac-

roecology at the Department of Biology of the University of Hamburg. He has been a senior researcher and lecturer for biodiversity and ecology at the University of Hamburg during the last four years and is presently unemployed. *Thus, job offers are welcome ;-).* In addition to his functions for EDGG, is he member of the Council of the International Association for Vegetation Science (IAVS), member of the Steering Committee of the Phytosociological Nomenclature Commission (PNC), and Chair of the Steering Committee of the Global Index of Vegetation-Plot Databases (GIVD). He is member of various regional, national, and international organisations in the fields of ecology, biogeography, botany, and conservation and serves in the editorial boards of four international journals.

Research interests: Macroecology and island biogeography – Species-area relationships and other scale dependencies in ecology – Biodiversity: quantification, patterns, and causes – Vegetation of dry grassland, tall-herb, and ruderal communities in Europe – Vegetation and land use in arid ecosystems and savannas of Africa – Methodological questions in vegetation science (e.g. phytosociological classification) – Biodiversity informatics and vegetation databases (establishment, analyses, connection with other databases, tools like electronic taxonomic reference lists) – Nature conservation (evaluation methods, red lists, management, population biology of invasive species) – Theoretical Ecology – Bibliometry and assessment of publication performance in ecology – Ecology, sociology, evolution, and systematics of closely related plant taxa, e.g. *Festuca ovina* agg. and *Festuca rubra* agg. – Development and improvement of determination keys for critical plant taxa – Collaboration in floristic mapping projects (vascular plants, bryophytes, lichens).



Monika Janišová

Responsibilities in the EDGG-EC: Editor-in-Chief of the Bulletin of the EDGG, Deputy Meetings Coordinator, Deputy-Representative towards IAVS.

Contact: Institute of Botany, Slovak Academy of Sciences, Ďumbierska 1, 974 11 Banská Bystrica, Slovakia

E-mail: monika.janisova@savba.sk

Personal homepage: <http://ibot.sav.sk/usr/Monika/>

Monika is a researcher at the Institute of Botany, Slovak Academy of Sciences. She has worked as managing editor of Bulletin of the EDGG for more than three years. She co-organized the European Dry Grassland Meeting 2010 in Smolenice (Slovakia).

Research interests: Several fields of vegetation science focussing on grassland ecosystems (classification, biodiversity, management models, secondary succession) and population biology of grasses and rare species.



Solvita Rūsiņa

Responsibilities in the EDGG-EC: Editor-in-Chief of the EDGG homepage (incl. other electronic media).

Contact: Department of Physical Geography, Faculty of Geography and Earth Sciences, University of Latvia, 19 Raina blvd., Riga, LV-1586, Latvia, Phone:

+37167332627, Fax: +37167332704

E-mail: rusina@lu.lv

Professional profile: Solvita is a lecturer at the University of Latvia, Faculty of Geography and Earth Sciences, and a postdoctoral researcher at the Institute of Biology, Laboratory of Geobotany. Her scientific interests are semi-natural grassland vegetation ecology, classification, geography, and spatiotemporal dynamics at a landscape scale.

At the Laboratory of Geobotany she is involved in the establishment of the national vegetation database, and research of boreonemoral forest vegetation dynamics in the context of air pollution and climate change. She is an editor of the local scientific journal "Vegetation of Latvia". She is one of the chairs of the European Dry Grassland Group (EDGG) from 2008 and an editor of its homepage.

Research interests: grassland, forest and forest fringe vegetation: phytogeography – syntaxonomy – phytodiversity – succession – conservation; vegetation development and succession in the context of landscape and site history.



Péter Török

Responsibilities in the EDGG-EC: Contact Officer to other organisations, Deputy-Secretary-General, Deputy-Officer of the Special Policy Committee

Contact: Department of Ecology, University of Debrecen, Hungary, H-4010 Debrecen, PO Box 71, Phone: +36 52 512900 /22632, Fax: +36 52 431148

E-mail: molinia@gmail.com,

Personal homepage: <http://ecology.science.unideb.hu/Tpeter/index-Eng.html>

Professional profile: Péter is an assistant professor at the University of Debrecen, Department of Ecology, Hungary. At the department of Ecology he is involved in several national and international projects connected to grassland restoration and management. He teaches elementary ecology, plant ecology and field methods in plant ecology for B.Sc. and M.Sc. students.

Research interests: His research interest covers conservation and restoration aspects, vegetation dynamics and seed banks in various types of grasslands.



Stephen (Steve) Venn

Responsibilities in the EDGG-EC: Secretary-General, Deputy-Editor-in-Chief of the EDGG homepage (incl. other electronic media).

Contact:

E-mail: Stephen.Venn@Helsinki.Fi

<http://www.helsinki.fi/urbanecologyresearch/members/venn.htm>

<http://www.helsinki.fi/urbanecologyresearch/greenhance/meadows.htm>

Professional profile: Steve is a member of the Urban Ecology research group at the University of Helsinki, Finland, where he is currently employed by the Finnish Science Academy project 126915 Greenhance: Enhancing urban biodiversity: habitat planning and strategic management of urban green areas. He also teaches the courses Workshops in Conservation Biology, Advanced Species identification: carabid beetles and History of Urbanisation and Urban Ecology. He is also a student of University pedagogy and is conducting research on research based teaching and learning.

Research interests: His research focuses on the plant-insect assemblages of dry meadow habitats and their potential role in the provision of ecosystem services, such as pollination, in urban areas. He also has a lot of experience in studies of carabid beetles (Coleoptera, Carabidae) of forest and grassland habitats in this region.



Michael (Mike) Vrahnakis

Responsibilities in the EDGG-EC: Meetings Coordinator, Officer of the Special Policy Committee.

Contact: Department of Forestry and Management of the Natural Environment, Technological Educational Institute of Larissa, Greece, Gr-43100 Karditsa, Phone: +30 6946281442 (mobile), Fax: +30 24410 71753

E-mail: mvrahnak@teilar.gr

Personal homepage: http://www.teilar.gr/person_en.php?pid=50

Professional profile: Mike is an assistant professor at the Technological Educational Institute of Larissa, Department of Forestry and Management of the Natural Environment, Greece. He is involved in several national projects connected to rangeland ecology, restoration and management, Natura 2000 habitat types. He teaches elementary rangeland ecology, rangeland management for B.Sc. students. He is member of the supervising committee of two Ph.D. students

Research interests: His research interest covers ecology, management, restoration aspects, and vegetation dynamics in various types of rangelands.

Overview of EDGG Subgroups

According to the EDGG Bylaws (Article 7.1), our members may organise Regional or Topical Subgroups. At their start, they need to be approved by the EDGG-EC (or by a vote of the members), but otherwise they act relatively independently. All EDGG members can join as many Subgroups as they like. If you wish to organise a new subgroup, feel encouraged to discuss this issue with the EDGG-EC. While EDGG now almost traditionally has four Regional Subgroups, the first Topical Subgroup was just founded a few days ago.

Topical Subgroup Grassland Conservation and Restoration

Foundation: 2011 (see the details on p. 8)

Aims: (a) Improving work contacts and joint actions in grassland conservation and restoration in Europe (b) Publication of special features and reports on evidence-based conservation and restoration of European grasslands

Members: 2 (but hopefully fast growing)

Contact person: Péter Török (molinia@gmail.com)

Regional Subgroup Arbeitsgruppe Trockenrasen

Foundation: 2004

Regional coverage: Germany

Aims: (a) Establishment of a comprehensive vegetation-plot database of dry grasslands in Germany. (b) Use of this database for consistent large-scale classification and various ecological analyses. (c) Publication of the dry grassland volumes of the *Synopsis der Pflanzengesellschaften Deutschlands*. (d) Network to communicate dry grassland-relevant information for Germany.

Members: 194

Contact persons: Ute Jandt (jandt@botanik.uni-halle.de) and Jürgen Dengler (dengler@botanik.uni-hamburg.de)

Regional Subgroup Working Group on Dry Grasslands in the Nordic and Baltic Region

Foundation: 2005

Regional coverage: Denmark, Norway, Sweden, Finland, NW Russia, Estonia, Latvia, Lithuania, Belarus, N Poland, NE Germany

Aims: (a) Establishment of a comprehensive vegetation-plot database of dry grasslands in the Nordic-Baltic re-

gion. (b) Use of this database for consistent large-scale classification and various ecological analyses. (c) Network to communicate dry grassland-relevant information for Germany.

Members: 80

Contact person: Jürgen Dengler (dengler@botanik.uni-hamburg.de)

Regional Subgroup Working Group on Mediterranean Dry Grasslands (Med-DG)

Foundation: 2009

Regional coverage: Greece, Cyprus, Turkey, S Bulgaria, Albania, Montenegro, Bosnia & Herzegovina, Croatia, Slovenia, Italy, Malta, S France, Spain, and Portugal

Aims: (a) Establishment and evaluation of a Mediterranean database of dry grassland relevés. (b) Platform for research and conservation of Mediterranean dry grasslands.

Members: 160

Contact persons: Mike Vrahnakis (mvrahnak@teilar.gr)

Regional Subgroup South-East European Dry Grasslands Group (SEEDGG)

Foundation: 2010

Regional coverage: Austria (Pannonian part), Czech Republic (Pannonian part), Hungary, Slovakia, S Poland, Croatia, Bosnia & Herzegovina, Serbia, Kosovo, Macedonia, Bulgaria, Romania, Moldova, Ukraine, Russia (forest steppe and steppe zone of European part), Armenia, Georgia, Azerbaijan, Kazakhstan (European part)

Aims: (a) Promotion the collaboration among researchers from different countries in SE Europe for studies and conservation of steppe vegetation and related grasslands. (b) Establishment of a comprehensive database for dry grasslands relevés from this region and its use for supra-national vegetation classification. (c) Organizing joint field trips to collect high-quality data on grassland diversity in insufficiently known regions in SE Europe.

Members: 187

Contact persons: Iva Apostolova (iva@bio.bas.bg)

New Topical Subgroup Grassland Conservation and Restoration

Coverage and membership

Conservation and restoration of grasslands became both key issues in policy and practice for the sustainable biodiversity of Europe. Thus, it is necessary to facilitate the communication between scientists and site managers in different regions, coordinate joint actions and disseminate evidence based results of grassland restoration and conservation.

Members and future members of EDDG working in all fields and aspects of conservation and restoration of grassland biodiversity are cordially welcome (see for contact below).

Contact person: Péter Török, molinia@gmail.com

Aims and future perspectives

(i) Establishment of a comprehensive database of scientists and site managers (at least representatives and coordinators for different regions and/or countries) improving work contacts and joint actions in grassland conservation and restoration in Europe.

(ii) Facilitation of publication both scientific and evidence based conservation and restoration special features and reports.

The first activity of the Subgroup are the two questionnaires on the subsequent pages.

Language: English



Photos: T. Miglécz and P. Török

Grassland Questionnaire of the EVS

Our sister organisation, the other European Working Group of IAVS, European Vegetation Survey (EVS), is presently conducting a survey on conservation status and dependence on agricultural practices of European grassland types. This knowledge is urgently needed to modify the Common Agricultural Policy (CAP) of the EU into a more conservation-friendly direction. Thus EDGG, and particularly the new Grassland conservation and restoration subgroup is strongly supporting this effort, and we ask all our members to contribute their knowledge of dry and other grasslands. Here is the call from Prof. John Rodwell, the Secretary-General of EVS:

A recent report by the European Forum on Nature Conservation and Pastoralism and the UK Grasslands Trust (accessible on <http://efncp.org>) showed that the definition of grasslands within the frame of EU Agri-environment policy is very inadequate. Because of this, large-scale intensification and abandonment of semi-natural grasslands continues to take place in many parts of Europe without it ever registering on the Common Agricultural Policy control system.

A recent paper aimed to identify Annex I habitats dependent on low-intensity agricultural management (Halada et al. 2011: Which habitats of European importance depend on agricultural practices? – Biodivers. Conserv. 20: 2365–2378; also outlined in the July 2011 Newsletter of the European Topic Centre on Biological Diversity). However, we have no clear European overview of the relationships between the wide diversity of different grasslands and various kinds of agricultural practice.

This is the kind of information which many members of the European Vegetation Survey might be able to provide. The attached questionnaire (European Grasslands Questionnaire 1 of 2) asks simple questions about the interventions/treatments which sustain grasslands and related vegetation types and about their extent and degree of threat. The framework of alliances used (European Grasslands Questionnaire 2 of 2) is that in

Rodwell et al. (2002: The Diversity of European Vegetation). We know that this is a first approximation with many deficiencies but it is the only overview we have at the moment. Also, it is the framework used by the EU to interpret the meaning of the EUNIS Habitat types that lie behind the Annex I Priority Habitats.

Even if you have disagreements with this overview, I would ask you to consider making some response to the questionnaire for the country/region for which you have knowledge. If you are familiar with more than one country/region, please submit separate questionnaires for each. This information will make a real difference to our understanding of and ability to defend grasslands which are declining in extent and under threat in many places.

I will collate the answers on behalf of all respondents from the EVS and produce a summary report as soon as possible. I will offer an outline of the results for the next Workshop in Vienna in 2012.

You find the two parts of the Questionnaire (1 – explanation; 2 – evaluation of the European alliances of grasslands and related communities) on our homepage for download at:

<http://www.edgg.org/news.htm#Questionnaire2>.

You do not need to be shocked by the length of Part 2; among the many phytosociological alliances listed on the 10 pages typically only around a dozen or less will occur in your region and only for those you should give your assessment. Please email completed questionnaires to johnrodwell@tiscali.co.uk before the **end of December 2011** and indicate in your covering letter that you are EDGG member. If EDGG members will make a significant contribution to the data collection, John Rodwell likely will also involve EDGG authors in the subsequent analysis and publication of the data.

*Jürgen Dengler, dengler@botanik.uni-hamburg.de
Péter Török, molinia@gmail.com*

Questionnaire - Application of prescribed burning in European grasslands

Considering prescribed burning as a grassland conservation tool is quite ambivalent. One hand, prescribed burning can be very effective with relatively low costs to (i) maintain or create open landscapes, (ii) reduce accumulation of litter in abandoned grasslands, (iii) speed up processes leading to target states of grasslands during restoration, and (iv) to decrease the chance of spontaneous wildfires. On the other hand burning can also have serious negative impacts on grassland ecosystems by promoting the dominance of problem species (e.g. some competitors

or invasive species) and by damaging several endangered plant and animal species (especially invertebrates). Inappropriate burning can result in a loss of species richness in the long run.

Thus, there is an increasing need summarising evidence based knowledge of application of burning in European grasslands considering (i) general (e.g. timing, frequency and duration) and specific (e.g. types of grasslands, effects on endangered species) application circumstances.

We are preparing a review of the applicability and constraints of prescribed burning practices in the conservation European grasslands. We have gathered information from published papers, but we would like to include a section with the evidence based and unpublished knowledge of prominent grassland experts from European countries.

We would kindly appreciate the contribution of EDGG members by answering a short questionnaire concerning the current use of burning practices in their country.

Thank you very much for your valuable contribution!

Péter Török, Orsolya Valkó, University of Debrecen, Department of Ecology, HÚ

Balázs Deák, Hortobágy National Park, HÚ

QUESTIONNAIRE

1. Is it possible (allowed by law) to use burning as a conservation tool in grassland management in your country?

2. If burning is not allowed, based on which law is burning prohibited (e.g. law of air pollution, restriction for the protection of property and life, etc.)?

3. If burning is allowed, is there any regulation about the timing (e.g. which season is it allowed)? **(if burning is not allowed by law, please leave empty)**

4. Are there any specific constraints of applying burning as a conservation tool in grasslands (e.g. only in some types of grasslands allowed/used, limited extension of the burned area, can burning be used in protected areas and/or Natura2000 sites)?

(if burning is not allowed by law, please leave empty)

5. What kind of permissions from authorities do you need for applying burning in grasslands?

(if burning is not allowed by law, please leave empty)

6. Burning grasslands without permission (illegal burning) is an existing problem in your country? (Please use underline)

not present / occasionally occurring / often occurring / is a serious problem in my country

7. Which types of grasslands are mainly subjected to burning without permission?

8. Which types of grasslands are most affected by natural wildfires (regarding to grassland type and management)?

9. Is/was burning a traditional land use practice for grasslands in your country?

10. Any other special expertise or information which you consider important to this topic:

(Have you got any published or unpublished experience on burning management in grasslands? If yes, can you please summarize your experiences in a few sentences or could you please send us some of your published papers or homepage link concerning your project?)

The questionnaire can be found and downloaded via the EDGG homepage at: <http://www.edgg.org/news.htm#Questionnaire>. If you are willing to contribute please send back the filled questionnaire as an e-mail attachment till 20th January 2012 to Péter Török (molinia@gmail.com).



Photo: T. Miglécz.

Activities of the European Dry Grassland Group

News from the 9th EDGG meeting in Prespa (19-23 May 2012)

According to the web page of the EDGG Meeting Prespa (http://www.edgg.org/edgg_meeting_2012.html) already 86 participants from 13 countries are registered (data of 13 December 2011). **The Organizing Committee decided to extend the deadline for abstract submission up to 19 of December.**

If you want to participate in the EVS meeting in Vienna directly after the EDGG meeting there is some information on flights from Thessaloniki to Vienna for the EVS meeting. Those of you who are thinking of this possibility please contact Mike at mvrahnak@teilar.gr.

Michael Vrahnakis

EDGG Special Features in ISI journals

The Special Features presently organised by EDGG for leading international journals are mostly developing extremely well. Below, we give an update on the present status; further details on the scope etc. can be found in Bulletin No. 12.

For the planned Special Issue of *Agriculture, Ecosystems and Environment* (AGEE; Impact factor = 2.790) with the working title “**Diversity patterns in European grasslands under the joint influence of agriculture and nature**” we received 68 abstracts by the deadline 30 November 2011. They come from zoology, botany, and mycology and cover numerous different aspects of biodiversity. Presently, they are evaluated by the team of guest editors (J. Dengler, M. Janišová, J. C. Habel, P. Török, M. Wieszik & C. Wellstein). The zoologist and population geneticist Jan Christian Habel (Luxembourg, LU & Trier, DE) has recently joined our team to ensure a broader editorial expertise in the fields of entomology and genetic diversity. As it presently appears, there are so many excellent abstracts among the proposals that we cannot accommodate them even in the most voluminous Special Issue. Therefore, the guest editors are now evaluating options to split this one Special Issue into two separate ones (one on fundamental questions of biodiversity patterns and one on biodiversity conservation) and we are seeking for a potential second journal. We will inform the authors of the abstracts probably in early January about the outcome and whether their full paper is invited or not.

The Virtual Special Feature of *Applied Vegetation Science* (AVS; impact factor = 1.802) on “**Towards a con-**

sistent classification of European grasslands” (guest editors J. Dengler, W. Willner & M. Chytrý) is also developing extremely well. Already more than 30 papers dealing with large-scale classifications have been announced. They deal with many different grassland types, such as mesic grasslands, wet grasslands, fens, dune grasslands, salt grasslands, ruderal grasslands, and alpine grasslands, but particularly many of them focus on different types of dry grasslands (see below). Abstract submission is still possible until 31 December 2011 to dengler@botanik.uni-hamburg.de.

By contrast, the annual **Dry Grassland Special Feature** of *Tuexenia*, which is now also in the Web of Science, did not receive a sufficient number of contributions yet. This is hardly understandable as *Tuexenia* was already a very attractive publication venue in the past (e.g. open access and colour photos free of charge, possibility of oversize vegetation tables), but now with the inclusion in the Web of Science increased its attractiveness even further. Presently, the number of submissions being processed unfortunately is so low that for 2012 it is not even clear whether there will be a Dry Grassland Special Feature at all (but accepted publications then would appear as regular papers). This would be a big pity for EDGG who had Special Features in *Tuexenia* continuously since 2005, and we should spend every effort to avoid such a situation!

So please consider to submit your regional and national-scale studies on flora, vegetation, and conservation of dry grasslands to *Tuexenia*. Those who submit very shortly after publication of Bulletin No. 13 will still have a chance to be included in *Tuexenia* 32 (2012), later submissions will go to *Tuexenia* 33 (2013). Submissions of full texts following the instructions to authors of *Tuexenia* can be made continuously to dengler@botanik.uni-hamburg.de.

Large-scale classifications of dry grassland syntaxa

Within the framework of the AVS Virtual Special Feature on Grassland classification, various multi-author consortia of EDGG members have assembled themselves to develop consistent phytosociological classifications over large territories based on individual relevés. We announce some of these projects below so that those who feel competent to contribute data to these can contact the respective lead author(s):

- **Calcareous dry grasslands (*Festuco-Brometea*) of the Nordic and Baltic region** (DK, NO, SE, FI, RU [Northwest], BY [no data yet], EE, LV, LT, PL [North], DE [Northeast]): Jürgen Dengler (dengler@botanik.uni-hamburg.de)

- **Steppe grasslands (*Festuco-Brometea*: orders *Festucetalia valesiacae* and *Brachypodietalia pinnati*) of the Pannonic, Carpathian and NW Pontic region** (AT [East], CZ [Southeast], SK, PL [South], HU, HR [Pannonian part], RS [Vojvodina], RO, UA [North], RU [parts adjacent to UA]: Wolfgang Willner (wolfgang.willner@vinca.at) & Anna Kuzemko (anya_meadow@mail.ru)

- **Rock grasslands (*Festuco-Brometea*: order *Stipo pulcherrimae-Festucetalia pallentis*) of the Pannonic and Carpathian region** (AT [East], CZ [Southeast], SK, PL [South], HU, RO, UA [Pannonian and Carpathian part], HR [Pannonian part], RS [Vojvodina]: Monika Janišová (monika.janisova@savba.sk)

- **Dry grasslands (*Festuco-Brometea*; *Koelerio-Corynephoretea*, including *Sedo-Scleranthetea* and *Festucetea vaginatae*; *Helianthemetea guttati*) of the Central Balkan Peninsula** (BG, RS [except Vojvodina], Kosovo, MK, GR [North]): Kiril Vassilev (kiril5914@abv.bg).

- **All dry grasslands (*Festuco-Brometea*, *Koelerio-Corynephoretea*, including *Sedo-Scleranthetea* and *Violetea calaminariae*) of Germany**: Ute Jandt (jandt@botanik.uni-halle.de) & Jürgen Dengler (dengler@botanik.uni-hamburg.de).

- **Calcareous dry grasslands (*Festuco-Brometea*) of Peninsular and NE Italy**: Daniela Gigante (daniela.gigante@unipg.it).

These papers will be a great contribution to the aims of EDGG! If all the six above-mentioned analyses are carried out as planned and the respective papers published, this would mean a modern relevé-based classification of the class *Festuco-Brometea* for approx. half of the European continent.

If other teams of authors also want to publicize their plans in order to find more co-authors and data contributors, they are welcome to submit such announcements in the next issues of the Bulletin.

Call for phytosociological relevés

Dear members of the EDGG,

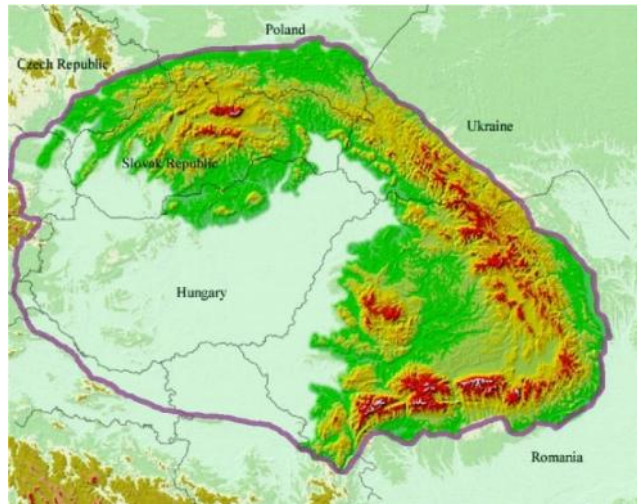
as a response to the planned Virtual Special Feature in Applied Vegetation Science (Bulletin 12, p. 24-25) we prepare a contribution focussing on large-scale classification of Pannonic-Carpathian *Stipo-Festucetalia pallentis* (with Monika Janišová as coordinating author) and Pannonic-Carpathian-Pontic steppe grasslands (with Wolfgang Willner and Anna Kuzemko as coordinating authors). The geographical scope of the study area (without the Pontic region) is shown in figure below.

We wish that our syntheses are as comprehensive as possible and so we plan to use not only available published sources of phytosociological relevés but also unpublished

relevés yet not included in recent phytosociological databases. If you would like to provide your unpublished relevés for these large-scale syntheses, please, contact us. If you will provide a large number of unpublished high-quality relevés or help us substantially in the preparation of paper, you are welcome to join our team as a co-author.

THANK YOU IN ADVANCE!

Monika Janišová, monika.janisova@savba.sk
Wolfgang Willner, wolfgang.willner@vinca.at



EuroSL – Plans for an electronic taxonomic reference of European plants

On 2–3 December 2011, a group of specialists from the European Vegetation Survey (EVS) and the Biodiversity Informatics Department of the Botanical Garden and Museum of Berlin (BGBM) met for the first time to discuss the need for and the specification of an electronic taxonomic reference list of all European plant taxa for use in vegetation databases and other plant-related databases. There was agreement that such a joint electronic reference list of vascular plants, bryophytes, lichens and macro-algae is urgently needed, e.g. for the supranational analyses of vegetation-plot databases. It should include not only accepted names of naturalized taxa, but also cultivated plants, casual neophytes, hybrids, informal aggregates etc. The working group agreed to develop such a EuroSL in a joint effort. While this very ambitious goal will need a serious amount of time before EuroSL 1.0 can be released, information on the current status of the development is available upon request from

Jürgen Dengler, dengler@botanik.uni-hamburg.de

News from policy-related activities of the Special Policy Committee (SPC-EDGG)

Laura Sutcliffe joins SPC-EDGG

SPC-EDGG welcomes the new member **Laura Sutcliffe**. Laura is a PhD student at the University of Göttingen, focusing on the plant ecology and social aspects of large-scale common grasslands in Transylvania, Romania. She previously worked briefly in the policy unit at Defra (the UK government department for environment and agriculture) and with the Natural Capital Initiative (a UK forum to bring environmental science into policy and practice), and is currently supported in Romania by the NGO Fundatia ADEPT, who work at all levels from farmers to government ministers to improve nature conservation practice in Romania.

News for Ukrainian steppes

There was a response from Ukrainian authorities (ref. 13.10.11 № 37-49-14/15552) related to the letter of appeal to stop Ukrainian steppe afforestation sent by EDGG in 5th of September 2011. The 5-page letter sent by mail by the Ministry of Agrarian Policy and Food of Ukraine arrived at Mike's office in Karditsa in 25th of October. The introduction letter was signed by the Deputy Minister Mr O.B. Сень (Fig. 1), while the scientific arguments were supported by the signatures of 9 scientific officers (Heads of Scientific Departments and Senior Researchers from SRIFAM(?) Ukrainian Scientific-Research Institute of Forestry and Agricultural Forest Melioration). The letter was written in Ukrainian (!) and thanks to Alex Burkovsky (public campaign "Save Ukrainian Steppes!") it was translated in English. Both versions (electronically scanned letter and English translation) are freely available, please ask Mike (mvrahnak@teilar.gr); given space restrictions only an abstract of the response will be given below.

According to the authors:

The provisions of the regulatory framework meets the requirements of European and international legislation in the sphere of nature management taken into account, including international conventions on biological diversity, including the Convention on Biological Diversity and the Convention on conservation of European wildlife and natural habitats (Bern Convention)..... Constitution of Ukraine (Article 13) and the Land Code (Article 1) defines the land as one of the main wealth of the State.... Plough-land is the highest in the world and reached 56 % of the country and 80 % of agricultural land (Land Code, Art. 1, § 9).

Steppes are dominated sown vegetation for agricultural purposes... *Natural vegetation, steppe, halophilous, psamophilous and wood ... remain only on lands unsuitable for cultivation.*

Given the dangerously low afforestation in Ukraine and Crimea ... *the primary objective of forest policy in these regions is to increase forest area primarily at places where they were planted in the past.*

It was pointed out that in the current structure of land in Ukraine, from 300-400 to 500-600 million tons of soil is lost every year from erosion (figures of dramatic nutrient losses are given). Yield of crops on eroded soils are 20-

*60 % lower than on not eroded.... ecological and economic losses due to erosion exceed \$ 10 billion. The area of agricultural lands exposed to negative impacts of water erosion is 13 million ha (32 % of total area).... **That is why it is necessary to pay attention to the protection of these lands against negative influence of erosion and nutrient depletion; this protection also includes the creation of protective forest plantations.***

The results of long-term research carried out by Ukr. SRIFAM (Ukrainian Scientific-Research Institute of Forestry and Agricultural Forest Melioration) showed that the forests in the steppe improve the yield of buckwheat by 10.6 %, the millet by 66.7 %, and decrease the damage from dust storms on winter wheat by 92.5 %. Figures from 10 years of experimentation showing benefits from afforestation to crop yield capacity, humus savings, agrochemical decreases, and pollutant concentrations are given.

State agencies have stated a gradual and scientifically-based decrease of ploughed area by approximately by 10 million ha (from 32 mil. to 22 mil. ha) for its transformation into other land categories: meadows and pastures, forests, recreational areas etc..... Moreover, for the purpose of saving pastures with natural structure and species composition ecological experts have identified the most valuable areas for wildlife, which will be placed into various categories of natural reserve, for inclusion into the system of a national ecological network...

So, delivery of land plots for afforestation in the Steppe Zone, after preliminary approval with several local and administrative establishments, has to be considered as an ecological rehabilitation of natural territories together with minimization and attenuation of ecological consequences of negative anthropogenic influence, that was made in previous historical period.

It is obvious from the above that authorities put emphasis in the well-documented and widely-accepted positive role of forest to halt soil loss and nutrient depletion, so increasing soil productivity and finally human welfare. Our (EDGG) arguments, presented in the appeal, are about the large scale afforestation programmes of "Ukrainian steppes by the Ukrainian State Agency of Forest Resources. Even though steppes are termed "low-yielding, degraded and eroding land" in the course of these activities, photos and other evidence presented at scientific conferences and on the internet prove otherwise. At the same time regions more suited to forest growth, i.e. Carpathians and Polesye, suffer from deforestation" (taken by the Appeal). Also, "Artificially created forests plantations in the steppe zone may fail international certification when satellite data show their low quality. Ploughing of steppe in order to prepare afforestation may even stimulate decomposition of below ground biomass and humus, thus causing significant carbon dioxide emission in the first place" (taken by the Appeal). The letter of Ukrainian authorities says a lot about the steppe as a land resource for economic profit¹ but nothing about the steppe as an ecosystem that benefits, among other, human life (Fig. 2).

The SPC-EDGG have decided to continue the campaign against large scale steppe afforestation by raising the awareness of international environmental NGOs, scientific boards and *fora*, environmentally-related political centres (EU Commission, Bern Convention, United Nations [Framework Convention on Climate Change](#) - FCCC). A good start was given by intervening in the 25th International Congress for Conservation Biology (ICCB 2011) Auckland, New Zealand 05-09/12/2011).

The new greening component in CAP - or where are Mediterranean rangelands? - A call for changes

Recently (19/10/2011) the European Commission released the Proposal for a Regulation of the European Parliament and of the Council for Establishing Rules for Direct Payments to Farmers under Support Schemes within the Framework of the Common Agricultural Policy (COM(2011) 625 final/2 - 2011/0280 (COD)). The Proposal sets the budgetary framework and main orientations for the Common Agricultural Policy (CAP). On this basis, the Commission presents a set of regulations laying down the legislative framework for the CAP in the period 2014-2020, together with an impact assessment of alternative scenarios for the evolution of the policy. The reform seeks to accelerate the process of integration of environmental requirements. It introduces a strong greening component into the first pillar of the CAP for the first time thus ensuring that all EU farmers in receipt of support go beyond the requirements of cross compliance and deliver environmental and climate benefits as part of their everyday activities. Thirty percent of direct payments will now be tied to greening, and these payments will ensure that all farms deliver environmental and climate benefits through the retention of soil carbon and grassland habitats associated with permanent pasture, the delivery of water and habitat protection by the establishment of ecological focus areas and improvement of the resilience of soil and ecosystems through crop diversification.

Among others, the EDGG members Apostolos Kyriazopoulos and Zoi Parissi from the Hellenic Range and Pasture Society (HERPAS, www.elet.gr), found out that the regulation neglects and finally excludes Mediterranean rangelands (apart from grasslands, rangelands may include shrublands, forest ranges, silvopastoral systems and phryganic systems) (Fig. 3). According to the regulation, payment scheme and other measures will be applied only on «permanent grassland» instead of «permanent pastures». According to the proposal «permanent grassland» means land used to grow grasses or other herbaceous forage naturally (self-seeded) or through cultivation (sown) and that has not been included in the crop rotation of the holding for five years or longer. It is also mentioned that it may include other species suitable for grazing (e.g. shrubs) provided that the grasses and other

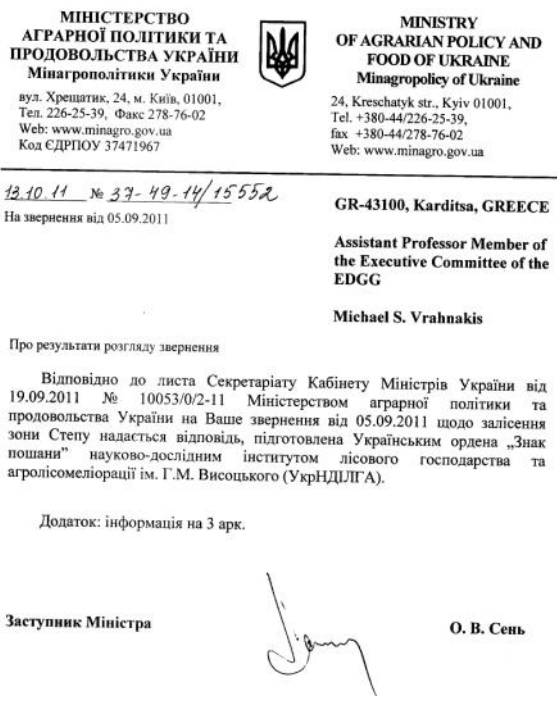


Fig. 1. The electronically scanned preface page of the response from Ministry of Agrarian Policy and Food of Ukraine.

¹ In addition there is a lot of dark money moving around afforestation... Quoting Valeriy Lovchinovskiy "It is amazing that the companies dealing in the timber market want to increase the purchasing of our raw material, but disguise their real motives with nature preservation slogans." You may have a look at his documentary film "WHERE HAS THE FOREST GONE? IT WAS STILL HERE YESTERDAY!" Link: <http://www.youtube.com/user/GreenVideoTM#g/c/7D8F8287FF1FF557>



Fig. 2 Hope for Ukrainian steppes! Nadiya (it means hope) Burkovska in a steppe near the village Novoeconomicheskoye in Donetsk region of Ukraine. Photo: O. Burkovsky.

herbaceous forage remain predominant (see page 24 of the regulation).

As the majority of the Mediterranean grazing lands are rangelands commonly covered with dominant woody vegetation (shrubs, trees etc) it is obvious that they may be excluded from new CAP regulation rules. However, Mediterranean rangelands are providing valuable fodder resources for both grazing (sheep) and browsing (goats) livestock. Especially for Greece, they play an essential role for the feeding of the 5,600,000 goats and the 9,200,000 sheep. Consequently, their exclusion from the new CAP regulation will probably have a negative impact on the Mediterranean livestock farming and the local economy.

The area of Mediterranean mountain pastures (mostly pseudalpine and alpine natural and semi-natural grasslands) have undergone rapid decline mostly due to human population decline that led to land abandonment, cessation of traditional practices, livestock pressure reduction, scrub and shrub encroachment and increase of catastrophic wildfires. Human population decline together with rapid modernization resulted in

dramatic decline of traditional activities that were key factors for controlling, among others, species rich communities in the past. Thus it is obvious that livestock grazing must retain in Mediterranean rangelands and to strengthen this activity CAP must include all types of rangelands in the definition of pastures, and further we strongly believe that Mediterranean rangelands will be included to the new CAP regulations for the period 2014-2020.

If you are interesting to change this status and the payment scheme and other measures to be applied on «permanent pastures», instead of «permanent grassland», please go to the website of the European Forum for Nature Conservation and Pastoralism

(EFNCP, www.efncp.org), which quickly realized the problem and is leading a European campaign to change the definition.

For SPC-EDGG:

Michael Vrahnakis, Karditsa, Greece

Ilya Smelansky, Novosibirsk, Russia

Laura Sutcliffe, Göttingen, Germany



Fig. 3 Goats grazing in a silvopastoral mountainous system in northern Greece. Photo: M. Vrahnakis.

4th EDGG research expedition to Sicily



An international research expedition of the EDGG will take place in **Sicily from March 29 to April 5, 2012**. This event is organised by Riccardo Guarino (University of Palermo) and Gianpietro Giusso del Galdo (University of Catania). Aim of the expedition is to investigate biodiversity patterns in the thermo-Mediterranean annual and perennial dry grasslands, with specific reference to environmental factors and spatial scales.

There are **14 places for EDGG members** to join this expedition. In order to ease the subsequent analytical work, a warm welcome is reserved to 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.

Should there be more interested colleagues than available places, priority will be given to the mailing date of the application, so, if you feel like you can't miss the event, please send your applications as soon as possible (**not later than February 28, 2012**) to the following contact persons:

Riccardo Guarino (riccardo.guarino@unipa.it)
Jürgen Dengler (dengler@botanik.uni-hamburg.de)

Applications should include name, surname, affiliation, address and a short statement of interest. Notification of acceptance (or otherwise) will be sent by March 3rd, 2010.

Why to Sicily?

Even if the thermomediterranean dry grasslands of Sicily have been thoroughly described in several phytosociological contributions (see Brullo et al., 2002; 2010), still many aspects remain poorly investigated, particularly concerning analyses of diversity patterns and conservation issues. In particular, we will try to assess the most predictive environmental variables for patterns of plant traits and species richness distribution. We will also try to check which bryophytes and lichens occur in which type, 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 Sicilian dry grasslands.

Another main focus will be the analysis of the patchiness in the vegetation at issue: the general systems theory has demonstrated the correlation between spatial heterogeneity and dissipative structures that can exist only within a certain range of values assumed by a set of environmental factors. In such a framework, we can assume that

the species diversity in the Mediterranean dry grasslands is constrained within certain limits of predictability by the spatial heterogeneity, periodical disturbance and stochasticity, that is the basis for understanding the coexistence, in the same plots, of annual and perennial species (Guarino & Ilardi, 2009).

For a detailed overview of the landscapes of Sicily, their vegetation and their physico-geographic environment, see pages 21-25 in this issue.

Our field survey will be carried out in the following syntaxa:

(C-strategy prevailing)

LYGEO-STIPETEA Rivas-Martínez 1978

Hyparrhienietalia Rivas-Martínez 1978

Avenulo-Ampelodesmion mauritanici Minissale 1995

Hyparrhenion hirtae Br.-Bl. P. Silya & Rozeira 1956

Thero-Brachypodium ramosi Br.-Bl. 1925

Bromo-Oryzopsis miliaceae O. Bolòs 1970

Arundion collinae Brullo, Giusso, Guarino & Scian-drello 2010

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

Moricandio-Lygeion sparti Brullo, De Marco & Sig-norello 1990

(S-strategy prevailing)

TUBERARIETEA GUTTATAE (Br.-Bl. in Br.-Bl. et al. 1952) Rivas Goday & Rivas-Martínez 1963

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

Tuberarion guttatae Br.-Bl. in Br.-Bl. & Wagner 1940

Malcolmietalia Rivas Goday 1958

Alkanno-Maresion nanae Rivas Goday ex Rivas Go-day & Rivas-Martínez 1963 corr. Diaz-Garretas et al. 2001

STIPO-TRACHYNIETEA DISTACHYAE Brullo in Brullo, Scelsi & Spampinato 2001

Trachynietalia distachyae Rivas-Martínez 1978

Trachynion distachyae Rivas-Martínez 1978

Stipo-Bupleuretalia semicompositi Brullo in Brullo, Scelsi & Spampinato 2001

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

Plantagini-Catapodium marini Brullo 1985

(R-strategy prevailing)

STELLARIETEA MEDIAE R.Tx., Lohmeyer & Preising ex von Rochow 1951

Thero-Brometalia (Rivas Goday & Rivas-Martínez ex Esteve 1973) O. Bolòs 1975

Hordeion leporini Br.-Bl. in Br.-Bl. & al. 1936 corr. O. Bolòs 1962

Echio plantaginei-Galactition tomentosae O. Bolòs & Molinier 1969

Sampling design

The idea of our expedition is to sample the full ecological range of thermo-Mediterranean dry grasslands of Sicily, so "a bit of everything", but at the same time to sample some geographic variability within the main structural types. We will have the possibility to see, as well, many interesting plant species. On Mt. Aetna, we will make a transect up to the oro-mediterranean vegetation belt, with observation on phenology and coenotic





differences in the *Brometalia rubenti-tectori* and *Tuberarietalia* vegetation.

We want to sample such a wide range to get baseline data on biodiversity patterns with the EDGG standardised sampling design, which has been illustrated by Dengler (2009), and results of a previous EDGG expedition have been published by Dengler et al. (2009). In particular, we will follow two complementary approaches:

1) Nested-plot sampling for biodiversity analyses on plots sized 0.0001 m²; 0.001 m²; 0.01 m²; 0.1 m²; 1 m²; 10 m²; 100 m², with all areas below 100 m² being replicated twice within the largest plot. Here we will sample complete species lists of vascular plants, bryophytes and lichens.

2) Vegetation relevés on 10 m² (10-m² subplots of the nested design + additional individual relevés): percentage cover value of all species (vascular plants, bryophytes, lichens); structural data (height and cover of layers); GPS coordinates (latitude, longitude, altitude); relief (inclination, aspect, relief position, microtopography); land use; soil depth, stone cover. Further, a mixed soil sample of the uppermost 15 cm will be drawn for subsequent lab analyses of basic chemico-physical parameters (pH; carbonate, conductivity, loss on ignition, soil texture class, skeleton content).

At the start of the expedition, a short training course will introduce all participants to the sampling approach, in order to achieve data of high and consistent quality. One fundamental idea of the EDGG field expeditions, is indeed the transfer of knowledge among EDGG members, both regarding species determination and methodological approaches of sampling, databasing and analysing the data. The data sampled will be used for one or several publication(s) in ISI journal(s), involving all participants of the field work as co-authors.

For any question or suggestion concerning the sampling approach, please contact Jürgen Dengler. When there are good ideas, we are very open to incorporate them into our sampling design!

Programme and costs

The programme is arranged in order to let the participants to reserve inexpensive flights to Trapani and Palermo. These airports are connected to several European countries with Ryanair and other low-fare companies. Participants are expected to arrive on March 29 by 11.30 am in Palermo- and by 1.00 pm in Trapani airports. In case of need, a second transfer from Trapani airport can be organized on the same day at 7.00 pm.

We will move with two small vans (9 seats each) offered by the Universities of Palermo and Catania; accommodation will be in hostels, B&Bs, or similar; lunch will be always in the field, with sandwiches and some fruits bought in small supermarkets; light dinners will be arranged in pizzerias and agriturismo. **The participation fee is 250 Euros per person.** The fee includes all transfer services on the island, gasoline, meals, accommodation. The fee DOES NOT include transfers to/from Sicily abroad, drinks, snacks, happy hours, spirits and any other tempting extras.

As concerns the sponsorships, Prof. Sandro Pignatti promised 1000 Euros through Forum Plinianum, International Association for Biodiversity. Jürgen has applied for additional funds from the IAVS. Taken together, we are optimistic that these supports will cover some costs for participants from low-income countries or colleagues whose financial situation (unemployed, student) would not otherwise allow their participation. We will know more after January 2012. Accordingly, when applying, please specify how much financial support you would need in order to be able to take part to the event. If you have any ideas where to apply for additional support, please let us know.



Pallenis maritima (L.) Greuter (above left), *Lygeum spartum* L. (above right), *Astragalus caprinus* L. subsp. *fuetii* (Bunge) Podlech (in the middle), *Hormuzakia aggregata* (Lehm.) Gusul. (below left), *Muscari gussonei* (Parl.) Tod (below right).
Photos: R. Guarino.



Schedule

MARCH 29

11.30-11.45 meeting at Palermo airport
12.45-13.30 meeting at Trapani airport (incl. some time to eat sandwiches)
13.30-14.20 transfer to Sciare di Mazara
14.20-18.10 Vegetation sampling (Thermomediterranean – Sandstones: Hyparrhietalia Bromo-Oryzopsis, Trachynietalia distachyae)
18.10-19.00 transfer to Trapani airport
19.00-19.15 (eventual) second meeting at Trapani airport
19.15-20.15 transfer to Macari (Cape St. Vito)

MARCH 30

9.00-9.45 transfer to Baglio Cofano
9.45-18.45 vegetation sampling around Mt. Cofano (Thermomediterranean - Limestones: Saginetea maritima, Hyparrhietalia, Trachynietalia distachyae, Echio-Galactition)
19.15 Back to Macari

MARCH 31

9.00-18.30 Along the Southern Coast, from Selinunte to Gela. Stops on the way in Heraclea Minoa (Capo Bianco) and Marina di Siculiana: evaporitic outcrops with salt-bushes and coastal sand dunes (Malcolmietalia, Stipo-Bupleuretalia, Lygeo-Stipetea). Night in Gela (Coop. Agrituristica La Cognata).

APRIL 1

9.00-9.30: transfer to Monte San Nicola
9.30-12.40: Field trip to Monte San Nicola and Butera hills: vegetation sampling on clay (Moriscandio Lygeion sparti, Gaudinio-Podospermion cani and Stipo-Bupleuretalia).
12.40-14.30: Lunch break and transfer to Manfria
14.30-18.30: vegetation sampling in the area of Torre Manfria (Stipo-Bupleuretalia, Malcolmietalia, Echio-Galactition, Lygeo-Stipetea)
19.30 Back to Gela (Coop. Agrituristica La Cognata).

APRIL 2

9.00-9.45: transfer to Sughereta di Niscemi
9.45-12.30 vegetation sampling in Sughereta di Niscemi (Cork-oak-woods and garigues on poor and leached sandy soils, with Tuberarion guttatae vegetation).
12.30-14.30 Lunch break and transfer to the hills of Caltagirone
14.30-16.30 vegetation sampling on claysh and marly soils (Avenulo-Ampelodesmion mauritanici, Trachynion distachyae)
16.30-18.30 transfer to Milo (Villaggio Angelo Musco)

APRIL 3

9.00-18.30: a transect across the eastern flank of Mt. Etna (observation on phenology and coenotic diversity in the Brometalia rubenti tectori and Stipo-Trachynietalia distachyae vegetation)
19.00 Back to Milo (Villaggio Angelo Musco)

APRIL 4

9.00 Transfer to Palermo, with a stop in Capo Zafferano (Avenulo-Ampelodesmion mauritanici; Trachynion distachyae).
15.30 arrival in Palermo - visit to the Botanical Garden and to some monuments of the town.
Night in Palermo (B&B Casa Carlotta + B&B Alessandro Cristina)

APRIL 5

Shuttle service to Palermo and Trapani airports

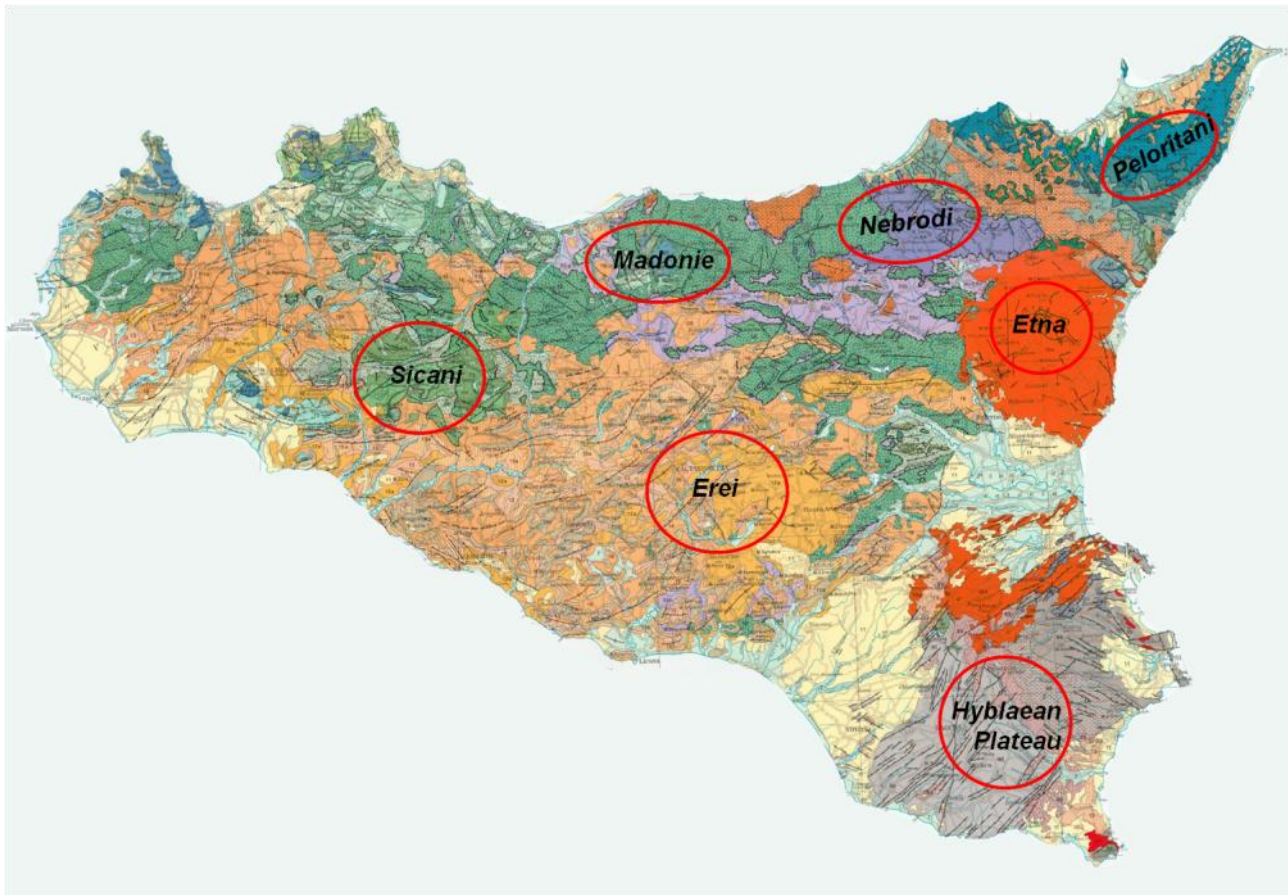
References

- Berg, C., Dengler, J. (2005): Moose und Flechten als diagnostische Arten von Pflanzengesellschaften – eine Übersicht aus Mecklenburg-Vorpommern. *Herzogia* 18: 145–161, Halle (Saale).
- Brullo C., Brullo S., Giusso del Galdo G., Guarino R., Minissale P., Scuderi L., Siracusa G., Sciandrello S., Spampinato G. (2010): The Lygeo-Stipetea class in Sicily. *Annali di Botanica (IV Serie)*, 0: 57-84, Rome.
- Brullo S., Giusso del Galdo G.P., Minissale P., Siracusa G., Spampinato G. (2002): Considerazioni sintassonomiche e fitogeografiche sulla vegetazione della Sicilia. *Boll. Acc. Gioenia Sci. Nat.*, 35(361): 325-359, Catania.
- Dengler, J. (2009): A flexible multi-scale approach for standardised recording of plant species richness patterns. *Ecol. Indic.* 9: 1169–1178, Amsterdam.
- Dengler, J., Ruprecht, E., Szabó, A., Turtureanu, D., Beldean, M., Uğurlu, E., Pedashenko, H., Dolnik, C., Jones, A. (2009): EDGG cooperation on syntaxonomy and biodiversity of Festuco-Brometea communities in Transylvania (Romania): report and preliminary results. – *Bull. Eur. Dry Grassl. Group* 4: 13–19, Hamburg.
- Guarino, R. (2011): Green landscapes of Sicily. – *Bull. Eur. Dry Grassl. Group* 13: ##–##, Hamburg.
- Guarino R., Ilardi V. (2009): An “Uncertainty Principle” for the Mediterranean annual dry grasslands. 52° IAVS Symposium, Book of Abstracts: 54, Chania.

Riccardo Guarino, Italy, riccardo.guarino@unipa.it
Jürgen Dengler, dengler@botanik.uni-hamburg.de



Green landscapes of Sicily



The physical setting

Sicily is the largest Mediterranean island, with an extension of nearly 26000 km². The Sicilian territory is predominantly hilly or mountainous: one fourth of the island is at more than 700 m a.s.l.; two thirds range between 300 and 700; one sixth below 300 m a.s.l.

The geographical position of Sicily, its complex geological history and the high topographic diversity make the island one of the most heterogeneous Mediterranean territories, under the geo-morphologic, edaphic and climatic viewpoint (Fig. 1).

The single most relevant landmark of the island is Mt. Etna (currently standing 3329 m), the biggest volcano of the Mediterranean region. It dominates the Eastern side of Sicily, with multiple layers of erupted materials that cover an area of 1190 km², with a basal circumference of 140 km.

Apart from Etna, the main elevations of Sicily (ranging from 1400 to 1979 m) are aligned along the so-called Sicilian Apennine, ranging along the NE-coast from the Strait of Messina up to the valley of the Torto River. Three sectors can be recognized, from east to west: Peloritani-, Nebrodi- and Madonie Mountains. Peloritani are constituted by the oldest outcrops of Sicily: a com-

plex of different metamorphic rocks (gneiss, schistose and phylladic alternations) partially covered by sedimentary sandstones and limestones. Nebrodi are mostly consisting of quartzose sandstones rocks, clayey and siltose depositions belonging to the Numidian Flysch. Madonie are formed by carbonatic, dolomitic and quartzitic outcrops, frequently interrupted by outcroppings of salty clay and layers of halite. Carbonatic and dolomitic rocks are forming, as well, the reliefs in the western part of Sicily, overlapping a basal complex constituted by carbonate sands and clays.

The central and southern parts of Sicily are characterized by the hilly complex of "normal" and "chaotic" depositions belonging to the Messinian evaporitic series (the "Gessoso-Solfifera" Formation), mixed with whitish marls of the late Pliocene and by yellowish Plio-Pleistocenic calcareous sandstones.

The south-Eastern corner of Sicily is formed by the carbonate platform named "Hyblaean Plateau", a succession of horizontal layers of mesozoic limestones frequently interrupted by a radial system of deep canyons departing from the highest elevation (Mt. Lauro, 970 m a.s.l.) formed by alkaline basaltic flows and calcareous tuff that covered the northern portion of the plateau during the Pliocene. The Hyblaean and the Etnean region are divided by the largest alluvial plain of Sicily, the so-called

"Piana di Catania", created by the depositions of the main Sicilian river: the Simeto, collecting water from the southern side of Mt. Soro (i.e. the main elevation of Nebrodi Mts.) and all along the western flank of Mt. Etna. The plain of Catania is the single most important agricultural area in the region, consisting of 108,097 ha of arable land and 102,350 ha of permanent crops.

Simeto is the only river of Sicily whose flow is reaching the average of 18 m³/sec., followed by the Alcantara (8.8 m³/sec.) and the Platani River (6.9 m³/sec.). Most of the Sicilian rivers are modest (less than 1 m³/sec.), with a pronounced seasonal gap during the summer months, due to the lack of rainfall, the short persistence of snow and the relatively small extension of the catchment basins.

Climate and bioclimates

The average annual temperatures recorded by the weather stations of Sicily are ranging between 17-18 °C at the sea level and 7-5 °C around 1800 m a.s.l. Trends of temperatures are greatly influenced not only by the elevations, but also by the distance from the sea and by the exposure: daily and seasonal temperature ranges are the lowest along the northern coast of the island (Zampino et al. 1997). The highest temperatures are recorded in July in the inner districts, with frequent peaks well above 40 °C. In the same areas, minimum temperatures go frequently below 0°C during the winter months. The coldest month is January, with average min. temperatures of 9-10 °C in the lowlands and 1-0 °C around 1800 m a.s.l.

According to the Rivas-Martínez's bioclimatic classification (Brullo et al., 1996), the following thermotypes and ombrotypes are occurring in Sicily (abbreviations: T = Average year temperature, It = Index of thermicity):

Inframediterranean (T = 18-20 °C, It = 500-450) upper semiarid (Lampedusa) and upper dry (Linosa and Pantelleria).

Lower Thermomediterranean (T = 16-18 °C, It = 449-400) lower dry (coastal districts from Licata to Pachino), upper dry (Egadi Islands, coastal districts from St. Vito Lo Capo to Licata and from Pachino to Augusta), lower subhumid (coastal districts from St. Vito Lo Capo to Capo Gallo, Cefalù, from Augusta to Acireale, NE-Hyblaeni, Aeolian Islands), upper subhumid (coastal districts from Cefalù to Messina).

Upper Thermomediterranean (T = 16-18 °C, It = 399-350) lower dry (Piana di Catania), upper dry (hills of southern and SE-Sicily), subhumid (inlands of Trapani and Agrigento, hilly and coastal districts from Giardini to Messina), lower humid (Mts. surrounding Palermo, foothills of northern Peloritani and eastern flanks of Etna, from Acireale to Giardini).

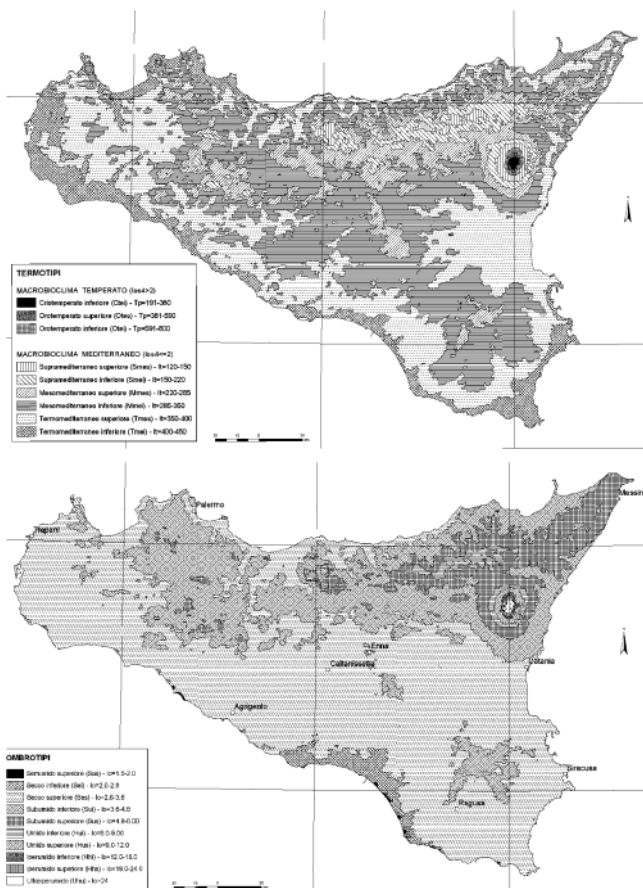
Mesomediterranean (T = 13-16 °C, It = 349-210) upper dry and lower subhumid (Mts. of western and central Sicily, southern flanks on Madonie and Nebrodi, southern Hyblaeni), lower humid (northern flanks of Nebrodi and Peloritani, top of the Hyblaean plateau), upper humid (eastern flanks of Etna and Peloritani).

Supramediterranean (T = 8-13 °C, It = 209-70) subhumid /lower humid (top of Madonie, Sicani, Nebrodi and western slopes of Etna), upper humid (top of Peloritani and eastern slopes of Etna).

Oromediterranean (T = 4-8 °C, It = 69- -10) humid (Etna, between 2000 and 2800 m a.s.l.).

Cryo-oromediterranean (T = 2-4 °C, It = -11- -100) upper humid (Etna, above 2800 m a.s.l.).

Distribution maps of the thermotypes and ombrotypes of Sicily are shown in figures below.



Flora and Vegetation

The vascular flora of Sicily and surrounding islets is currently estimated in around 3000 species (Giardina et al., 2008): floristically, the Sicilian territory turns out to be one of the richest in the Mediterranean. The high diversity of species is primarily related to the previously mentioned high topographic and bioclimatic diversity of the island. Moreover, for its geographical position, Sicily can be defined the crossroad of the Mediterranean flora, as

many species are reaching here the northern- (*Reaumuria vermiculata*, *Zyzyphus lotus*, *Rhus tripartita*, etc.), southern- (*Fagus sylvatica*, *Ferulago campestris*, *Allium ursinum* etc.), eastern- (*Chamaerops humilis*, *Ambrosina bassii*, *Cistus crispus* etc.), western- (*Fritillaria messanensis*, *Salvia fruticosa*, *Jasminum fruticans* etc.) limit of their distribution range. These occurrences testify ancient biogeographical connections with the mainland (starting from the Messinian Age), as well as the plant migrations driven by the Plio-Pleistocenic climate swings. Climate changes may locally lead to the severe reduction and splitting of plant populations. This is the case, for instance, of the disjoint Sicilian populations of *Heteropogon contortus*, *Artemisia alba*, *Sesleria nitida* ssp. *sicula*, *Koeleria splendens*, *Helictotrichon convolutum* that probably reached the island in the Pleistocene, during the dry interglacial periods (Guarino, 2006).

At the same time, the insularity and the geographical segregation of refuge areas (coastal capes and high mountain districts) promoted the survival of many biogeographical relics and the differentiation of a rich endemic flora, currently estimated in 338 species, among which the genera *Allium*, *Limonium*, *Astragalus*, *Anthemis*, *Erysimum*, *Centaurea*, *Brassica*, *Viola*, *Hieracium* display remarkable examples of schizo-endemics resulted from the splitting of ancient distribution ranges, combined with the efficient occupation of particular ecological niches.

In addition to the schizo-endemics, many Tertiary relics survived in Sicily, some of which are currently known as palaeo-endemics. This is the case, for example, of *Abies nebrodensis*, *Cytisus aeolicus*, *Erica sicula* ssp. *sicula*, *Petagnaea gussonei*, *Pseudoscabiosa limonifolia*, *Rhamnus lojacconi*, *Zelkova sicula*. As a whole, approximately 1/4 of the whole Sicilian flora (about 750 taxa) has got a remarkable biogeographical and systematic interest (Brullo et al. 1995). Many of these elements are currently threatened by the human activities.

Most natural communities have been degraded or permanently altered throughout Sicily and surrounding islets. The natural vegetation is threatened by continuing conversion to agriculture, pasture, and urban areas. Frequent fires, logging of remaining native woodlands, exotic species, intensive grazing are also common threats, as well as the touristic exploitation of the coastal districts. As Sicily has been a central crossroads of human activity for thousands of years, it offers a major perspective on all the problems and challenges of accommodating humans and nature in the much trampled Mediterranean basin.

The vegetation of the island shows almost everywhere the traces of a long-lasting exploitation of the land. The only well preserved patches of natural vegetation are limited to the most inaccessible places (cliffs, screes, rocky ledges, very steep slopes and windy ridges, plus the Enean heights). In total, they cover a surface of

about 7300 ha, i.e. 0.29% of the island (Bazan et al., 2009).

With reference to the phytosociological classification of the Sicilian plant communities (Brullo et al. 2002), the best preserved natural plant communities of Sicily are those belonging to the following syntaxa: *Rumici-Astragaletea siculi* (orohopilous chamaephytic vegetation), *Scrophulario-Helichrysetea* (hemicyptophytic and chamaephytic vegetation of screes, talus slopes and riverbeds) *Saxifragion australis* (chasmophytic vegetation on alkaline rocks), *Dianthion rupicolae* (chasmophytic vegetation on acidic rocks) and, in part, *Crithmo-Limonietea* (halo-chasmophytic vegetation of rocky coasts).

The Sicilian woodlands can be also included in the relatively well preserved natural vegetation, although most of them are disturbed by husbandry and periodical coppicing. The following phytosociological units are represented (Brullo et al., 2008): *Quercetalia ilicis* (holm-oak woods, cork-oak woods, plus a large number of different wood-types dominated by the turkey-oak and/or by the downy-oak: a rather intricate species-complex well-known for its extremely high variability in Sicily); *Quercu-Fagetea* (beech-woods, riverside woods). In total, Sicilian woods are covering approx. 72000 ha, i.e. 2.9 % of the island.

The rest of the island is mostly colonized by secondary and synanthropic vegetation. The secondary vegetation includes chestnut-woods and reforestations, scrublands (*Quercetalia calliprini*, *Prunetalia spinosi*), *garigues* (*Cisto-Micromerietea*, *Cisto-Lavanduletea*), perennial semi-natural grasslands (*Molinio-Arrhenateretea*, *Lygeo-Stipetea*), covering in total 23.12% of the island. The synanthropic vegetation (*Onopordetea acanthii*, *Secalietea*, *Stellarietea mediae*, etc.) is widely distributed on 1,245,000 ha, i.e. nearly 50% of the island, wherever an extensive agriculture is performed (Brullo & Guarino, 2007; Brullo et al. 2007). Most of the Sicilian territory is occupied hard-wheat fields, but other dry-land farming, like olive groves and plantations of almond, pistachio, ash-tree, still characterizes a relevant part of the Sicilian rural landscape (figure below).



Intensive agriculture covers around 25% of the island. Citrus groves, orchards, greenhouses and vineyard are included here. The impact of intensive agriculture is progressively increasing, together with the popularity of the Sicilian wines and early-fruits. Mechanized agricultural practices, chemical fertilizers and pesticides are drastically selecting the weedy plants, penalizing the Mediterranean plants and enhancing the chances of non-native weeds. Modern technology, like everywhere in the world, underpin the modern trend "from local to global". It is hard to believe that ubiquitous plants, like *Oxalis pes-caprae* or *Pennisetum setaceum*, arrived in Sicily such a short time ago. They belong to a process of "banalisation" of the landscape that is one of the newest form of global impact.

Trends at landscape scale, protected areas and management problems

As we have seen, the main feature of the Mediterranean region is a remarkable diversity of habitats, with hilly or mountainous inland and few alluvial plains in coastal sites. There is a tight coexistence of semi-natural and synanthropic ecosystems, with a great topographic and biological diversity, driven by ecological gradients of different intensity, highly influenced by the distance from the sea and by the orientation and altitude of the mountains.

The natural patchiness of the Sicilian landscapes has been often increased up to critical levels by the human activities. Land use and human demography have significantly changed during the last six decades, as a consequence of the mechanization of agriculture, the decline of the extensive land use and traditional agriculture, particularly on terraced fields (Barbera et al., 2009). The development of new economic sectors, like services and infrastructures functional to the tourism, promoted the concentration of people within few miles from the coastline, with an ever increasing impact on coastal habitats. On the other hand, many lands used by agriculture or husbandry until recent times are currently abandoned, particularly in the mountain districts (Fig. 5).



Bull. Eur. Dry Grassl. Group 13 (December 2011)

One of the newest issues in the policy of the Sicilian administration is the protection of natural and cultural landscapes. The first three protected areas have been created in the year 1981 (regional law nr. 98), all three in coastal districts: Stagnone di Marsala, Vendicari, Lo Zingaro. In 1988, with the regional law nr. 14 1988, followed by the Regional Plan for wildlife preserves, issued in 1991, to the first three protected area, 79 new ones have been added. In addition to these protected areas, four regional parks were established: Etna in 1987, Madonie in 1989, Nebrodi in 1993 and Alcantara in 2001.

In more recent times, following the "Birds Directive" (79/409/EEC) and the "Habitats Directive" (92/43/EEC), the "Natura 2000 network" of Sicily includes 214 SCIs (Sites of Community Importance) and 47 SPZ (Special Protection Zone), many of which overlapping the previously mentioned regional parks and reserves. When the management plans of SCIs and SPZs will become operative, 8% of the Sicilian territory will be protected (Guarino, 2008).

Two main kinds of protected areas can be found in Sicily: those occurring on mountains are on average quite extended, the coastal ones, instead, are on average six times smaller. Many of them are just little spots that have been set to save the saveable, i.e. the few coastal traits escaped from the massive urbanization that took place in those districts in recent times. The conservation and management of the Sicilian coastal sites, exposed to the pressure of strong economical interests, is quite problematic and poses a number of specific themes (Guarino & Guglielmo, 2010).

To promote conservation strategies in situ for threatened habitats and species of Sicily, it is urgently needed a network of stakeholders, administrators and scientific experts which will support capacity building, management and policy actions. Unfortunately, these intentions are inevitably constrained by the lack of scientific knowledge on the ecosystem functioning and by the reality of limited economical resources. Conservation must therefore be based on the establishment of priorities, in order to determine how these limited resources could be best allocated (Guarino et al. 2011).

People's perception on protected areas is, in most of the cases, limited to the recreational or aesthetical function of biotopes and biodiversity: a kind of "playground for ecologists" that can be used for outdoor activities and experiential marketing. This limited view should be widened through the use of protected areas as living labs for the environmental education, to raise the public awareness on the function of ecosystems, but unfortunately managers and planners seem to be much more sensitive to the marketing and promotion of typical products and to the construction of infrastructures in order to improve accessibility and usability of these areas.



This is not necessarily a negative aspect, but it can be so if it becomes the priority target for the development of protected areas. Environmental education is also education to a smart parsimony, to the reduction of waste, to the awareness of gestures. It is also education to the motion, to walk on natural terrains by adapting to the roughness of the pathways. Too many habitats and natural sceneries have been irreparably spoiled by senseless interventions to “improve” accessibility and usability. This is the case, for example, of the renowned Etnean “Rifugio Sapienza” and surrounding areas, where thousands of absent-mindedly tourists are brought on Mt. Etna “to walk on the lava”, with best regards to the superficiality that already characterizes the average way of living of the urban people.

The only way to contrast these dangerous shortcuts is to look at the Natura 2000 network and, more in general, to every protected area, as a system with strong interactions with the non protected areas, i.e. part of the productive system at the basis of the economical development of the human societies. To preserve biodiversity on the long term, it would be probably more effective to reduce the energetic inputs around the protected areas, rather than to build infrastructures and to implement management plans and actions within them.

References

- Barbera G., Cullotta S., Rossi-Doria I., Rühl J. & Marino E., 2009: Inventario dei paesaggi a terrazze in Sicilia. ARPA, Palermo.
- Bazan G., Baiamonte G. & Marino P., 2009: Land forms, land-use and landscapes in Sicily. Proc. of the International Congress “Biodiversity Hotspots in the Mediterranean Area: species, communities and landscape level”: 176.
- Bazan G., Marino P., Schicchi R. & Surano N., 2006: Analisi geostatistica integrata come metodo per la conoscenza del bioclima della Sicilia. 10a Conferenza nazionale ASITA, Bolzano, 1: 253-258.
- Braun-Blanquet J., 1964: Pflanzensoziologie (terza ed.). Springer, Wien.
- Brullo S., Gianguzzi L., La Mantia A. & Siracusa G., 2008: La classe Quercetea ilicis in Sicilia. Boll. Accademia Gioenia Sci. Nat., 41 (369): 1-124.
- Brullo S., Giusso del Galdo G.P., Minissale P., Siracusa G. & Spampinato G., 2002: Considerazioni sintassonomiche e fitogeografiche sulla vegetazione della Sicilia. Boll. Acc. Gioenia Sci. Nat., 35(361): 325-359.
- Brullo S., Giusso del Galdo G., Guarino R., Minissale P. & Spampinato G., 2007: A survey of the weedy communities of Sicily. Annali di Botanica, 7 (n.s.): 127-161.
- Brullo S. & Guarino R., 2007: The Mediterranean weedy vegetation and its origin. – Annali di Botanica, 7 (n.s.): 101-110.
- Brullo S., Minissale P. & Spampinato G., 1995: Considerazioni fitogeografiche sulla flora della Sicilia. Ecol. Medit. 21 (1/2): 99-117.
- Brullo S., Scelsi F., Siracusa G. & Spampinato G., 1996: Caratteristiche bioclimatiche della Sicilia. Giorn. Bot. Ital., 130: 177-185.
- Delfrati L., Falorni P., Groppelli G. & Pampaloni R. (Eds.), 2000: Carta geologica d'Italia 1:50000. Quad. Serv. Geol. It., ser. III, vol. 7.
- Giardina G., Raimondo F.M. & Spadaro V., 2007: A catalogue of plants growing in Sicily. Boccone, 20: 1-582.
- Guarino R., 2006: On the origin and evolution of the Mediterranean dry grasslands. Berichte der Reinhold Tüxen Gesellschaft, 18: 195-206.
- Guarino R. (in press): La sindrome delle aree protette. In: Moschini R. & Pignatti S. (eds.): Ricerca naturalistica, conservazione dell’ambiente e della biodiversità in Italia. ETS, Pisa.
- Guarino R. & Guglielmo A. (eds.), 2010: Il litorale di Manfreda (Gela) - natura e storia da proteggere. Edibo, Catania.
- Zampino S. Duro A., Piccione V. & Scalia C., 1997: Fitoclima della Sicilia. Termoudogrammi secondo Walter & Lieth. Atti 5° Workshop Prog. Strat. C.N.R. “Clima, Ambiente e Territorio nel Mezzogiorno” Amalfi 2: 7-54.

Riccardo Guarino, University of Palermo, Italy
riccardo.guarino@unipa.it

International conference “Steppe habitats of Europe”, Erfurt (Germany), June 2012

From 3rd to 6th of June 2012 the international conference “Steppe habitats of Europe - threat, conservation measures, and protection” is held in Erfurt (Thuringia, Germany). This conference is organized by the LIFE+-project “Conservation and development of the steppe grasslands in Thuringia”. The conference sessions compass the following main topics:

1) The distribution of steppe relic species and steppe habitats in Europe in the chorological, ecological and vegetation history context, 2) Natura 2000 – Sub-Pannonian steppes of Central Europe (continental region), 3) Natura 2000 – Sub-Pannonian steppes and loess-steppes of Central Europe (Pannonian region), 4) Natura 2000 – steppe habitats in Romania and Bulgaria - (continental region, steppe region and Black Sea region), 5) Steppe habitats of the „Emerald Network“ (Berne Convention), 6) Conservation and management of steppe

habitats and steppe relic species, and 7) Ex situ-/In situ-conservation of steppe plants species.

Two excursions will lead to four of the 13 project areas in the Thuringian basin. The final programme will be published at the end of January 2012 on the project's website.

Registration is possible from now in the project office. The participation in the conference and the excursions is free of charge!

More information and conference flyer with application form:

<http://www.thueringen.de/de/tmlfun/themen/naturschutz/steppenrasen/aktuelles/content.html>

e-mail: tagung@steppenrasen.thueringen.de

The LIFE+-Project „Conservation and development of the steppe grasslands in Thuringia“

Background of the project LIFE07 NAT/D/000213

The project area comprises 13 sub-areas, which are part of designated Natura 2000 sites. These areas are situated in the Thuringian basin (Thüringer Becken), with hills of clay, gypsum and the Triassic limestone substratum (Keuper, Muschelkalk) and in the north-eastern part of the area from metalliferous Permian strata (Bottendorf hill). Locally there are Pleistocene loess and alluvial sediments. The climate of all sub-areas is dry-warm (sub-continental/continental); the region is one of the driest in Germany. The Thuringian basin harbours the main distribution of the sub-Pannonian steppe grasslands of Germany that are narrowly interspersed with other dry grassland types. The sub-Pannonian steppes and dry grasslands provide extreme habitat conditions, which result from the dry climate, the poor development of soil and the location's barren setting. They offer a habitat for many highly specialised animal and plant species and are characterised by high biodiversity. Among them numerous species are distributed mainly in Mediterranean and Eastern areas. Their populations in the Thuringian basin display the western range margin and are partially rated as national or European rarities. The sub-Pannonian steppes and dry grasslands are home to botanical and

animal treasures, including rare plant species such as Stem-less milkvetch (*Astragalus exscapus*), Viper's grass (*Scorzonera purpurea*), Wolly milkvetch (*Oxytropis pilosa*), Pheasant's eye (*Adonis vernalis*) and Toothed orchid (*Orchis tridentata*), the butterfly *Chazara briseis*, the Blue-winged grasshopper (*Oedipoda caerulea*) and the Land snail (*Trochoidea geyeri*).

Project objectives

The project aims are the long-term conservation, development and enlargement of the Sub Pannonian steppe grasslands (*6240), semi-dry grasslands and scrubland areas on calcareous substrates (order Festuco-Brometalia) (important orchid sites *6210) and rupicolous calcareous or basophil grasslands of the alliance Alysso-Sedion (*6110), all of which are of nationwide importance. Further aims of the project are the improvement of transhumance, restoration of habitat corridors, specific management actions for the protection of endangered species and promotion of acceptance of the Natura 2000 programme. With duration of six years (1.1.2009-31.12.2014) and a total budget of five million Euros, more than 90 individual projects will be implemented. Due to the outstanding significance of the project the



Keuper badlands with Adonis vernalis at the Burg Gleichen hill. Photo: Th. Stephan.

maximum funding rate of 75 % has been granted by the European Commission. The remaining 25 % is funded by the Free State of Thuringia. The project could serve as a model and give a practical boost to steppe grasslands conservation in Germany and some neighbouring countries. Management plans, including grazing concepts, have been prepared for every project area. Land purchase of 220 hectares has been foreseen. The project will improve the sheep-farming infra-structure of the project areas. It is the intention that land users will become long-term partners for biotope management in the project areas, and comprehensive public relations activities will inform the public about the importance of the target habitats and the Natura 2000 network. The management will be closely monitored and indicator species evaluated. At the end of the project the restored steppe and dry grasslands will be protected through long-term management measures.

Contact:

Dr. Henryk Baumbach

Project manager

LIFE-Projektbüro des Thüringer Ministeriums für Landwirtschaft, Forsten, Umwelt und Naturschutz (TMLFUN)

Uhlandstraße 3, 99610 Sömmerda, Germany

<http://www.thueringen.de/de/tmlfun/themen/naturschutz/steppenrasen/>

e-mail: life-steppenrasen@thueringen.de

Recent publications of our members

Koncz G., **Török P.**, Papp M., Matus G., Tóthmérész B. (2011): Penetration of weeds into the herbaceous understorey and soil seed bank of a Turkey oak-sessile oak forest in Hungary. *Community Ecology* 12 (2): 227-233.

Török P., Miglécz T., Valkó O., Kelemen A., Deák B., Lengyel Sz., Tóthmérész B. (2011): Recovery of native grass biodiversity by sowing on former croplands: Is weed suppression a feasible goal for grassland restoration? *Journal for Nature Conservation*, DOI: 10.1016/j.jnc.2011.07.006

Wellstein C., Schröder B., Reineking B. & Zimmermann N. E. (2011): Understanding species and community response to environmental change – A functional trait perspective. *Agriculture, Ecosystems and Environment* 145: 1-4.

Contact to the authors:

Peter Török: molinia@gmail.com

Camilla Wellstein: camilla.wellstein@uni-bayreuth.de

Book reviews

In this section, we will publish reviews of recent books relevant for dry grassland research and conservation. Apart from titles particularly dealing with dry grasslands, also more general titles can be included, as for example phytosociological overviews, floras/faunas and field guides of relevant taxa, or text books on methodology, ecology, and conservation/restoration. Jürgen Dengler (dengler@botanik.uni-hamburg.de) serves as Book Review Editor. Thus, if you are an author, editor or publisher of a book and want to have it reviewed in the Bulletin of the EDGG, please, just contact him. The same applies to EDGG members who want to review a specific new title.

Chytrý, M. (2009) [Ed.]: Vegetace České republiky – 2. Ruderální, plevolová, skalní a suťová vegetace (Vegetation of the Czech Republic – 2. Ruderal, Weed, Rock and Scree Vegetation) [in Czech, with English summaries]. 520 pp., Academia, Praha. ISBN 978-80-200-1769-7. Price: 565 CZK.

Chytrý, M. (2011) [Ed.]: Vegetace České republiky – 3. Vodní a mokřadní vegetace (Vegetation of the Czech Republic – 3. Aquatic and Wetland Vegetation) [in Czech, with English summaries]. 827 pp., Academia, Praha. ISBN 978-80-200-1918-9. Price: 850 CZK (available with 15% discount from <http://www.academiaknihy.cz/vegetace-ceske-republiky-3-vodni-a>

Two new volumes of the planned four-volume series of the Czech vegetation have been published recently, one on ruderal and rock vegetation and one on aquatic and semi-aquatic non-woodland vegetation. The first volume, which covers grassland and related communities, including all the dry grasslands, was published in 2007 and reviewed in Bulletin No. 3 (2009, p. 28: Chytrý 2007). Unfortunately, volume 2 is already out of print, but you might find still some copies in book shops. By contrast, a slightly updated second edition of Volume 1 has been published in 2010 and is still available (550 CZK, or 468 CZK from the above mentioned e-shop). Hopefully, editor and publisher will find a way to re-publish also Volume 2.

Volume 2 presents eight vegetation classes with 119 associations, while the thick Volume 3 contains 10 classes with 178 associations. Volume 2 is particularly relevant to dry grassland researchers as it contains the transitions of dry grasslands to ruderal communities (*Artemisietea vulgaris*), rock communities (*Asplenieta trichomanis*) and scree communities (*Thlaspieta rotundifolii*). Each of the syntaxa is described in a detailed text (in Czech, with summaries in English), with extensive and well-structured synoptic tables, lists of diagnostic species, distribution maps, ecological profiles (mainly based on Ellenberg Indicator Values) and many nice and instructive photographs. The classification is based on a comprehensive national vegetation database and the thorough application of a consistent methodology (which is presented in a concise English methods chapter in each of the volumes).

Without any doubt, the “Vegetation of the Czech Republic” is presently the most advanced example of a country/

state overview of all extant plant communities following a consistent modern approach. Therefore, any serious phytosociologist in Europe should have this series on his/her book shelf, in particular as the authors also thoroughly revised the nomenclature of all treated syntaxa, which makes this series a major reference work in this respect. Luckily, the authors also put an end to the “deductive” approach (and its many derivatives), which once emerged in their country, and in doing so followed two other major recent syntaxonomical reference works (Berg et al. 2001, 2004, Willner & Grabherr 2007). The deductive approach (e.g. Kopecký & Hejný 1994) to differentiate vegetation types in “real” syntaxa on the one hand (those having character species of their own) and a wide array of different “basal”, “fragmental” or whatsoever communities, while looking “logic” at first glance appears to be circular reasoning at closer look and it creates a differentiation (implicitly connected with a valuation) where there is no ecological difference (Dengler 2003).

Despite this overall extremely positive evaluation of the series, there are still points that can be criticized and where I would have preferred another solution:

The authors disregarded the syntaxonomic level of order, and treated only associations, alliances and classes. This is not supported by arguments and it is unfortunate as this impedes comparisons with other national overviews and also the application of phytosociological nomenclature where the ordinal rank is obligatory (i.e. vegetation classes need to be defined by orders).

The tables in the books do not reflect the full variety of vegetation types in the country as only those relevés have been included that directly matched the COCKTAIL

definitions of the units. Thus, the tables suggest that the associations are much crisper than they are. Actually, one could classify 100% of all relevés and still receive reasonably well separated units (see Berg et al. 2001, 2004).

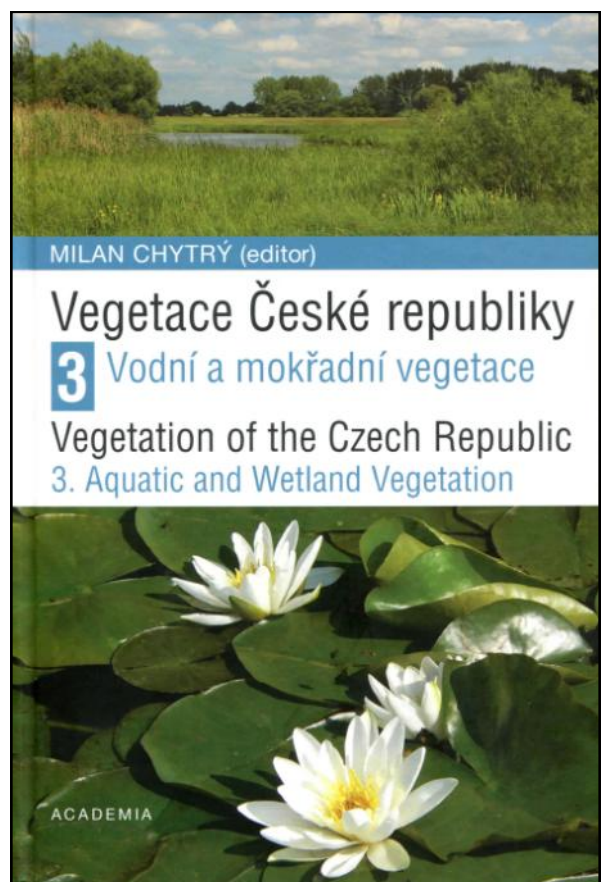
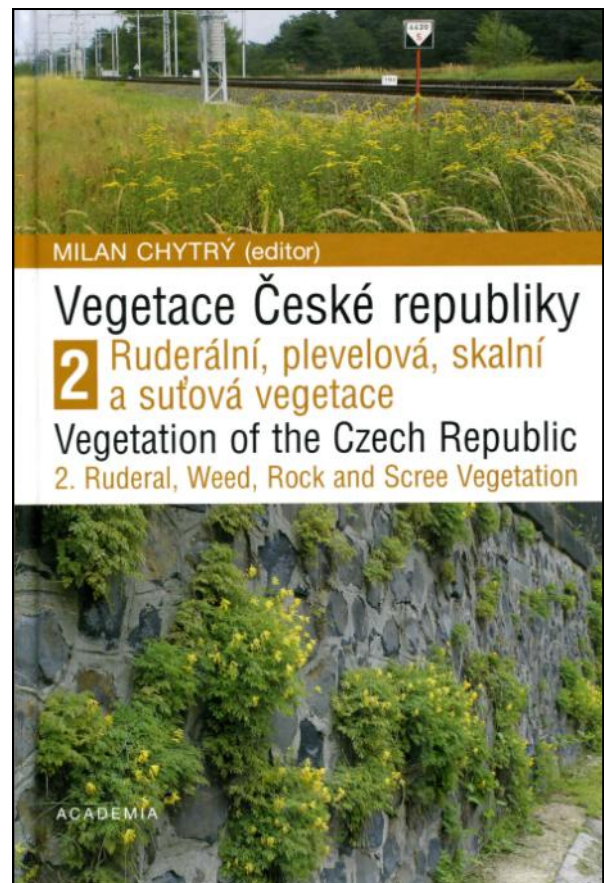
Some vegetation types are completely omitted from the presentation. For example, the very frequent ruderal associations *Rubus caesii*-*Calamagrostietum epigeji* and *Elymo repentis*-*Rubetum caesii* (see Berg et al. 2004) are not presented under this name nor any other, similar to all associations of acidophilous forest edge-communities of the order *Melampyro pratensis*-*Holcetalia mollis* (except the *Pteridietum aquilini*, which is placed in the *Epilobietea angustifolii*). All these community types are particularly widespread in the Czech Republic, the *Rubus*-*Calamagrostietum* even is shown in extensive stands on the cover photo of Volume 2. From the reading, it is not clear to me why these associations are nevertheless excluded from the presentation. Perhaps the authors had difficulties to develop appropriate COCKTAIL definitions or there was a lack of relevés.

One disadvantage I see is the extreme splitting approach in some vegetation classes, in particular in the water vegetation. For example, while Berg et al. (2001, 2004) needed six associations to cover the full variety of *Lemnetea* communities, Chytrý (2011) distinguishes not less than 17 (which are more than the total number of diagnostic species in this class!).

References

- Berg, C., Dengler, J., Abdank, A. (2001) [Eds.]: Die Pflanzengesellschaften Mecklenburg-Vorpommerns und ihre Gefährdung – Tabellenband. – 341 pp., Weissdorn, Jena.
- Berg, C., Dengler, J., Abdank, A., Isermann, M. (2004) [Eds.]: Die Pflanzengesellschaften Mecklenburg-Vorpommerns und ihre Gefährdung – Textband. – 606 pp., Weissdorn, Jena.
- Chytrý, M. (2007) [Ed.]: Vegetation of the Czech Republic – 1. Grassland and heathland vegetation [in Czech, with English summary]. – 526 pp., Academia, Praha.
- Dengler, J. (2003): Entwicklung und Bewertung neuer Ansätze in der Pflanzensoziologie unter besonderer Berücksichtigung der Vegetationsklassifikation [with English summary]. – Arch. Naturwiss. Diss. 14: 297 pp., Galunder, Nümbrecht.
- Kopecký, K., Hejný, S. (1974): A new approach to the classification of anthropogenic plant communities. – Vegetatio 29: 17–20, The Hague.
- Willner, W., Grabherr, G. (2007) [Eds.]: Die Wälder und Gebüsche Österreichs – Ein Bestimmungswerk mit Tabellen. – 2 vols., 302 + 290 pp., Spektrum Akademischer Verlag, Heidelberg.

Jürgen Dengler, Hamburg, Germany
dengler@botanik.uni-hamburg.de



Naaem, S., Bunker, D. E., Hector, A., Loreau, M., Perrings, C. (2009) [Eds.]: Biodiversity, Ecosystem Functioning, and Human Wellbeing – an Ecological and Economic Perspective. XIV + 368 pp., Oxford University Press, Oxford. ISBN 978-0-19-954796-8. Price: 39.95 GBP.

In the consequence of the *Convention on Biological Diversity* (Rio de Janeiro 1992) the two concepts of “ecosystem functioning” and “ecosystem services” gained more and more prominence in ecological research, and particularly in the science-policy interface. Basically, they try to link human wellbeing to high degrees of biodiversity and use these findings – in a utilitarian view on nature – as justification for the conservation of biodiversity. However, the relationships are not always that simple...

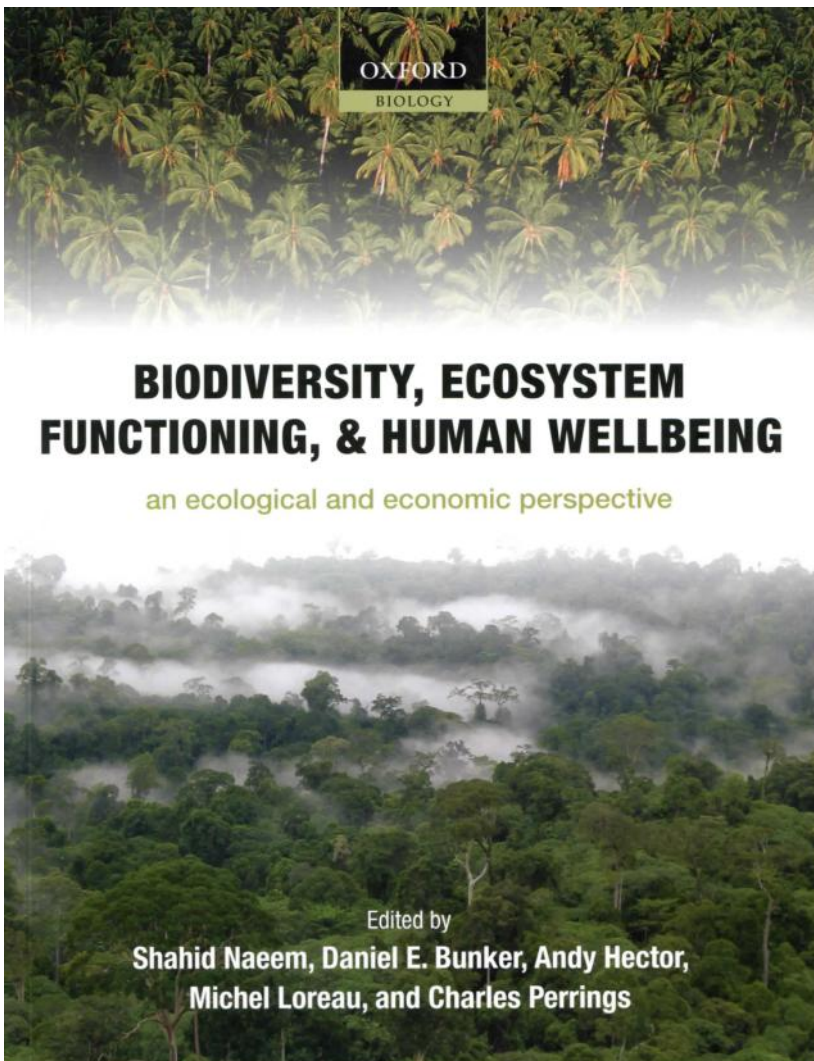
Therefore, the present collection of papers is highly welcome as it presents the state of knowledge in this field of ecological research. It brings together the major authors on that topic, who dominated the scene for the past 1.5 decades. It is organised in four parts with 21 articles, many of which are sharing the same authors in diverse permutations. Part 1 contains “Introduction, background

and meta-analyses”. Part 2 then provides the natural sciences perspective (“ecosystem functioning”/EF). Here, *inter alia*, Petchey et al. give an overview on various measures of functional diversity and how they are related to taxonomic diversity, and Griffin et al. present a meta-analysis how biodiversity affects the stability of ecosystem functions. Part 3 addresses the utilitarian perspective (“ecosystem services”/ES). Among the topics here is the role of biodiversity for ecosystem functions in human-dominated ecosystems in general (Jackson et al.), and for pollination services in particular (Klein et al.). There are also three articles that try to value biodiversity and ecosystem services in economic terms (Perrings et al., Barbier et al., Brock et al.). Part 4 (“Summary and synthesis”) finally contains an article on TraitNet (a metadata-base of species trait databases), but, while being an important contribution to ecological research, it is questionable why this should be a summary and synthesis to the

book, and a final chapter on the predictability of the effects of global change on biodiversity loss and ecosystem functioning (Naeem et al.). The volume is completed by an extensive reference list of 58 pages.

Overall, this is a valuable though not easily accessible work, as the language is often very technical, and most studies presented are meta-analyses on an abstraction level far from the real biodiversity patterns out there in nature. While such meta-analyses are certainly important to “extract” general “laws” from the idiosyncrasies of many different studies around the world, it seems important, not to remain at the highly abstract level of these meta-data. Also executive summaries (or abstracts) at the end (or the beginning) of each chapter would have been beneficial for the readers. And finally, after having entered the “cosmos” of ES/EF research, one should not forget that functional diversity is only one aspect of biodiversity, and the utilitarian approach to nature is not the only possible one.

Jürgen Dengler, Hamburg, Germany
dengler@botanik.uni-hamburg.de



Forthcoming events

6th Annual Meeting of the Specialist Group on Macroecology of the Ecological Society of Germany, Austria and Switzerland (GfÖ)

29 February–2 March 2012, Frankfurt (Main), German

Deadline for registration and abstract submission: 17 December 2011

Details: http://www.bik-f.de/root/index.php?page_id=362&cms_veranstaltung_id=162

4th EDGG Research Expedition

Vegetation and diversity of dry grasslands of Sicily

29 March – 5 April 2012, Sicily, Italy

Deadline for registration: 28 February 2012

See this Bulletin on pp. 16-20

9th European Dry Grassland Meeting

Dry grasslands of Europe: grazing and ecosystem services

19–23 May 2012, Prespa, Greece

Deadline for registration: 28 February 2012

Details: www.edgg.org/edgg_meeting.html, see Bull. 12 (pp. 3-9)

21st Workshop of the European Vegetation Survey (EVS) and 11th Meeting on Vegetation Databases

24–28 May 2012, Vienna, Austria

Deadline for registration and abstract submission: 28 February 2012

<http://evs2012.vinca.at/index.shtml>

International conference “Steppe habitats of Europe”

3–6 June 2012, Erfurt, Germany

Deadline for submission of oral contributions: 20 January 2012

Deadline for registration and poster abstract submission: 30 April 2012

<http://www.thueringen.de/de/tmlfun/themen/naturschutz/steppenrasen/aktuelles/content.html>

55th Symposium of the International Association for Vegetation Science (IAVS)

23–28 July 2012, Mokpo City, South Korea

Deadline for abstract submission: 31 March 2012

Deadline for registration: 31 May 2012

<http://www.iavs2012.org/iavs2012/iavs4.asp>

3rd European Congress of Conservation Biology

28 August – 1 September, 2012, Glasgow, Scotland

Deadline for registration and abstract submission extended: 15 January 2011

<http://eccb2012.org/>

European Conference on Ecological Restoration

9–14 September 2012, České Budějovice, Czech Republic

Opening of the online registration: 15 January 2012

42nd Symposium of the Ecological Society of Germany, Austria and Switzerland (GfÖ)

10–14 September 2012, Lüneburg, Germany

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

XIV Meeting of the FAO-CIHEAM Subnetwork on Mediterranean Pastures and Fodder Crops

3-6 October 2012, Samsun, Turkey

Contact: Ignacio Romagosa, E-mail: iamz@iamz.ciheam.org

Details: <http://www.iamz.ciheam.org>



Nonea vesicaria (L.) Rchb. Photo: R. Guarino



Bulletin of the EDGG, official organ of the European Dry Grassland Group (EDGG), ISSN 1868-2456

The Bulletin is published quarterly at the Biocentre Klein Flottbek, University of Hamburg, c/o Jürgen Dengler, Ohnhorststr. 18, 22609 Hamburg, Germany. It is sent to all members of the organisation (734 members from 51 countries as of 15 December 2011) and alongside with all previous issues it is also freely available at <http://www.edgg.org/publications.htm>. Bulletin 13 (2011) of the EDGG was published on 19 December 2011.

Editors: *Monika Janišová (Editor-in-Chief, monika.janisova@savba.sk, Institute of Botany, Slovak Academy of Sciences, Ďumbierska 1, 974 11 Banská Bystrica, Slovak Republic), Michael Vrahnakis (Karditsa, Greece), Jürgen Dengler (Hamburg, Germany), Solvita Rūsiņa (Riga, Latvia), Péter Török (Debrecen, Hungary), Stephen Venn (Helsinki, Finland). Linguistic proof-reading: Laura Sutcliffe.*

The signed contributions are the responsibility of the respective authors and they should be quoted in standard format. Copyright of the included photographs remains with their authors, credit should be given to the author whenever photographs are reproduced.

Important dates: *The deadline for Bulletin 14 is 28 February 2012*

Bulletin 14 to appear: March 2012

Bulletin 15 to appear: June 2012