

of the European Dry Grassland Group



Introduction

The spring has come at last. Soon, all European naturalists will be very busy with their fieldwork. Before this happens, however, we invite you to read this Bulletin issue, which presents several interesting contributions and news on the numerous EDGG activities. The number of EDGG members exceeded 800 last month. Soon, the key EDGG events will take place - the EDGG research expedition to Sicily (Italy) and the European Dry Grassland Meeting in Prespa (Greece). You can find the most topical information about their preparation on the following pages. You can learn about the development of four prepared special issues focussing on grasslands. You can also learn which grasslands belong to the biodiversity hotspots at small scales. Besides that, you can find here information on the upcoming meetings and events, three book reviews and numerous smaller announcements from our members. Maybe you will notice that in this issue we have used some new graphical elements. We hope you like the changes! To make this and the future Bulletins more user-friendly, we have also adopted some structural changes and developed a fixed sequence of sections. The longer contributions (reports and research articles) in the central part of the Bulletin will have the structure of normal scientific papers so that they could easily be printed, posted and shared as separate items. Most of the beautiful photographs of animal and plant species included in the issue were provided by Rocco Labadessa from Bari (Italy). We wish you a pleasant read!

Editors

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Coscinia striata (male), Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 23 May 2010

March 2012

EDGG homepage: 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.

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.

EDGG Subgroups

EDGG members are automatically assigned to the Regional Subgroup corresponding to their place of residence. If you additionally want to join other Regional Subgroups or the new Grassland Conservation and Restoration Subgroup, just send an e-mail to the Membership Administrator (dengler@botanik.uni-hamburg.de).

♣ Arbeitsgruppe Trockenrasen (Germany) (contact: jandt@botanik.uni-halle.de, dengler@botanik.uni-hamburg.de): 199 members

♣ Working Group on Dry Grasslands in the Nordic and Baltic Region (contact: dengler@botanik.uni-hamburg.de): 81 members

♣ South-East European Dry Grasslands (SEEDGG) (contact: iva@bio.bas.bg): 214 members

♣ Mediterranean Dry Grasslands (Med-DG) (contact: mvrhna@teilar.gr): 273 members

♣ Topical Subgroup Grassland Conservation and Restoration (contact: molinia@gmail.com): 38 members

EDGG Executive Committee and responsibilities of its members

Jürgen Dengler: Membership Administrator, Representative towards IAVS, Coordinator for Special Features, Coordinator for EDGG Expeditions, Book Review Editor, Deputy Contact Officer to other organisations.

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

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

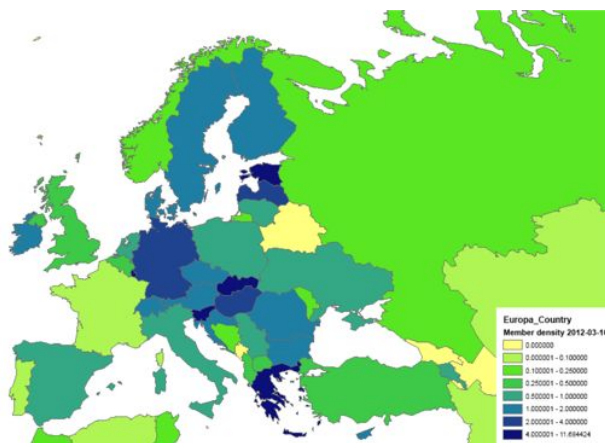
Péter Török: Contact Officer to other organisations, Deputy-Secretary-General, Deputy-Officer of the Special Policy Committee

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

Michael Vrahnakis: Meetings Coordinator, Officer of the Special Policy Committee.

Membership development

The number of EDGG members has grown enormously since the last Bulletin. As of 10 March 2012, we had 808 members from 52 countries. The highest numbers of members are from Germany (196), Greece (128), Italy and Ukraine (each 36), Slovakia and Spain (each 34), and Poland and Romania (each 30). By contrast, we are still particularly poorly represented in Kazakhstan, France, and Portugal (each with less than 0.2 members per 1,000,000 inhabitants) and not at all in Belarus, Azerbaijan, Georgia, and Montenegro (see the map). Activities to gain members from these countries are therefore particularly valuable.



Density of EDGG members per 1,000,000 inhabitants as of 10 March 2012.

News from the 9th European Dry Grassland Meeting in Prespa

The 9th European Dry Grassland Meeting is drawing near. Abstract submission and registration are already closed (from 28 February). One deadline is still open; the one of 26th of March 2012 for full paper submission addressed to those who wish to see their work in the conference proceedings intended to be published shortly after Prespa. According to the participant profiles, a great variety of professions and scientific interests from almost all topics of Grassland Science are represented. Currently, 223 participants from 25 countries are already registered; promising numbers for a successful meeting.

The Scientific Committee has been already formed and will start work on the 26th of March, while the Organizing Committee is drafting a preliminary programme of talks and posters.

An important request: For those who are planning to come to Prespa, please take care to make your room reservations on time. You can use the EXCEL file available in the web page of conference (http://www.edgg.org/edgg_meeting_2012.html) clicking details in English (or details in Greek) under the heading Accommodation.

Looking forward to meeting you in Prespa!

Mike Vrahnakis, mvrahnak@teilar.gr



*Psarades village in the lakeshore of Macro Prespa with *9562 Grecian juniper woods standing in the background. Lakeshore appears in the left. Photo: M. Vrahnakis*

4th EDGG Research Expedition to Sicily

From 29 March – 5 April, the 4th EDGG Research Expedition will take place in Sicily upon the invitation of Riccardo Guarino and Gianpietro Giusso del Galdo. After the great success of the previous three EDGG Expeditions (2009 – Transylvania; 2010 – Ukraine; 2011 – Bulgaria), also the expedition in Sicily is fully booked with 15 participants from 6 countries. As in previous years, we will sample standardised high quality data for use in international collaborations in biodiversity research and consistent large-scale classification. From the previous expeditions now the first papers for ISI journals prepared by the participating scientists are close to submission, and many more will follow.

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

Formal announcement for the 10th European Dry Grassland Meeting of 2013

The Executive Committee of the EDGG is pleased to announce that the 10th European Dry Grassland Meeting will be co-organized by the Naturalists' Club and the Institute of Biology (Department of Geobotany) of Maria Skłodowska University, in Lublin (Poland). The nomination was registered during the 8th EDGM, at Smolenice, in accordance with article 8.1 of the EDGG bylaws, and the nomination has now been unanimously accepted by the Executive Committee. More information about the meeting, including details about the main theme, topics and venue, will be presented by our Polish colleagues during the General Assembly of the Prespa Meeting on 19th of May 2012.

Stephen Venn, Secretary-General



*Janowiec castle, view from Męcimierz grasslands.
Photo: Piotr Chmielewski*

EDGM future conference venues

The European Dry Grassland Meeting (EDGM) is one of the most important means for specialists on European dry grasslands, and the members of the EDGG of course, to communicate ideas, results, news, initiatives, projects, and much other information relevant to dry grassland resources. The EDGM is an integral part of EDGG; it is considered as a facility (Article 2.3.d of the EDGG Bylaws) that helps EDGG to achieve its aims, and is mentioned several times in the Bylaws (e.g. Art. 2.2.a, 2.3.d, 4.1.d.III, 4.2.4.a.IV, 4.5.b, 5.1) with Art. 8 absolutely dedicated to it.



*Prionotropis appula (male), endemic of S-Italy. Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 6 June 2010*

Originally, prior to the official establishment of the EDGG (2008), the EDGM was organized annually in different places throughout Germany (Table 1). From 2008 onwards, the frequency remained the same but the venues expanded across Europe (Smolenice in Slovakia, Uman in Ukraine, Prespa in Greece). The size of the EDGMs (number of participants and contributions) steadily increased (e.g. from 40 registered participants in 2009 to 220 in 2012), reflecting the general success story of EDGG.

As the EDGMs grow in importance, their organization becomes increasingly difficult and needs a long time for

planning and preparation. The recently appointed EDGG Meeting Co-ordinators Mike Vrahnakis and Monika Janišová have already started communication with some possible future EDGM organizers. In order to prevent the



Allium roseum, Bari, Apulia, Italy.
Photo: Rocco Labadessa, 12 April 2011

competition among several individual organizers, it is desirable to have the decision on the venue of the future meetings two years before the meeting should take place. We remind the reader of Art. 8.1 of the Bylaws, which states that

“Each potential future European Dry Grassland Meeting (venue, date, topic, excursions) has to be presented and discussed in at least one General Assembly prior to a decision. After such a presentation, a Qualified General Assembly (i.e. an Assembly of 40 EDGG members from at least 10 different countries, see Art. 4.3) can decide (a) to accept the proposal; (b) to delegate the decision to the Executive Committee...”

Thus, we plan to have the official decision on venue of the EDGM 2014 be made during the 9th EDGG meeting in Prespa in May 2012. (EDGM-2013 is already settled for Poland; please see the official announcement in this Bulletin). To date, we have a concrete offer for EDGM in 2014 (preferably) or 2015 by the Russian team from Tula, while general interest was also expressed by Romanian and German teams.

If you are interested in organizing one of the future EDGMs, EDGM-2014 included, we would like to encourage you to send us a detailed proposal in the near

future. If you are making a proposal for EDGM-2014, please could you also produce a presentation and send it to us to show it to the General Assembly at Prespa. Proposals should always first be discussed in detail with the Meeting Coordinators before presenting proposals to the EDGG. Given the low activity of EDGG in western and south-western European countries so far, proposals from these countries would be of particular interest. The proposal and/or presentation should contain at least the following information:

- (a) year and preliminary date of the meeting
- (b) place (state, city/town)
- (c) organizing team and organizing institutions
- (d) preliminary topic and subtopics
- (e) planned excursions

Please address your interest to Mike
(mvrahnak@teilar.gr)

and Monika (monika.janisova@savba.sk).

Mike Vrahnakis & Monika Janišová, Meeting Co-ordinators

EDGG Special Features in ISI journals

We have been overwhelmed by the number and quality of abstracts submitted to the planned two new Special Features in international journals organised by the EDGG. For the Special Feature devoted to diversity patterns in European grasslands, we received 68 proposals, much more than any single issue of a journal could accommodate. Luckily, we managed to convince another high-ranking journal to publish a second diversity-related Special Issue. Therefore, not less than four EDGG Special Issues are presently emerging in ISI journals.

Special Issue of *Agriculture, Ecosystems and Environment* (Impact factor = 2.790)

Title: **Grassland biodiversity: patterns, processes and conservation**

Guest editors: J. Dengler, M. Janišová, P. Török & C. Wellstein

Submitted abstracts: 68

Invited papers: 20

Deadline for submission: 30 June 2012

Scheduled publication: early 2013

Special Issue of *Biodiversity and Conservation* (Impact factor = 2.146)

Title: **Diversity patterns in European grasslands across taxa, regions and scales**

Guest editors: J. C. Habel, P. Török, M., J. Dengler, M. Janišová, C. Wellstein & Wiezik

Invited papers: 26

Deadline for submission: 30 June 2012

Scheduled publication: early 2013

Virtual Special Feature of *Applied Vegetation Science* (Impact factor = 1.802)

Title: **Towards a consistent classification of European grasslands**

Guest editors: J. Dengler, E. Bergmeier, W. Willner & M. Chytrý

Submitted abstracts: 21

Invited papers: 12

Conditionally invited papers: 3

Deadline for submission: 30 September 2013

Scheduled publication: mid 2014

This Special Feature is jointly organised by EDGG and EVS (European Vegetation Survey). There will be a second deadline for proposing abstracts after the EVS conference in Vienna (30 June 2012). Interested authors may contact dengler@botanik.uni-hamburg.de to ask for details.

Annual Dry Grassland Special Feature in *Tuexenia* (no impact factor yet, but included in the Web of Science since 2011)

Guest editors: T. Becker, D. Galvanek & J. Dengler

Submitted papers: 4 (+ potentially 1 more)

Scheduled publication: May or June 2012

There also will be an Annual Dry Grassland Special Feature in *Tuexenia* 33 (2013). Interested authors may contact dengler@botanik.uni-hamburg.de to ask for details.

Recently, Jürgen Dengler, EDGG Coordinator for Special Features, was appointed as an Associate Editor in two ISI journals closely related to EDGG: *Applied Vegetation Science*, one of the journals of our mother organisation IAVS, and *Tuexenia*, the journal of the FlorSoz, our long-term supporter.

history in your country/region e.g. history of dry grassland research/protection/ restoration; iii) personalities who contributed or who are contributing to dry grassland research/protection/restoration; iv) successful/significant project contributing to dry grassland research/protection/restoration or v) interesting results of dry grassland research, information on the state of the phytosociological database, etc.

Monika Janišová, monika.janisova@savba.sk



Melanargia arge, endemico of S-Italy, Otranto, Apulia, Italy. Photo: Rocco Labadessa, 9 May 2009

Introduce your favorite grassland site

Perhaps you remember the interesting contributions on particular grassland communities or grassland sites which have been introduced to the EDGG members in the earlier issues of the Bulletin (series “**Remarkable dry grassland type/site**”). We would like to encourage you to share knowledge, experience and photographs of your favourite grassland site or association. Remarkable localities of dry grassland habitats can be introduced representing e.g. important research areas, refuges of rare and endangered species or simply places requiring special conservational measures.

Similarly, contributions to the series “**Dry grasslands in European countries**” are very welcome. This section is devoted to overviews of dry grassland research activities in different countries/regions of Europe. We believe that exchange of information can help all of us to get a better understanding of the overall situation of dry grassland research and conservation. The contributions should preferably fit in one of the following categories: i) overview of dry grassland research/protection/restoration in your country/region; ii) single aspect of dry grassland

Send your pdfs to the EC

We, the members of the EDGG-EC would greatly appreciate, if you, the EDGG members, could send us pdfs of your new (and past) dry grassland-related publications. We are very interested in the research carried out by our members and we often are in the position to provide relevant papers and other information when a request reaches the EDGG-EC. So it should be in your own interest that your articles are at our disposal if you wish your valuable work be recognised adequately. Beyond this general information aspect, we are also starting to collect all relevant information on European dry grasslands in the context of our long-term idea to publish sometime in the near future a comprehensive book on “Biodiversity, ecology and conservation of dry grasslands in Europe”. To make your publications accessible to us, please send pdfs to

dengler@botanik.uni-hamburg.de

and rusina@lu.lv.

Articles in the Bulletin No. 1-13

In the past 13 Bulletins, a total of 17 full articles on a wide variety of topics have been published by our members – below you find an overview of these. Some of them appeared in one of the two series “**Remarkable dry grassland type/site**” and “**Dry grasslands in European countries**”, others were independent contributions. Altogether, these articles contributed much to the attractiveness of our Bulletin. To make these articles better available and retrievable via search engines such as Google Scholar, we plan to upload them as individual items (in addition to the full Bulletin issues) both on the EDGG homepage and the server of the German National Library where the articles further will be accompanied by searchable author and keyword fields. To increase the attractiveness of publishing long articles in the Bulletin, such contributions will appear in the style of articles in scientific journals from now on, always starting on top of a page, with authors and their affiliation below the title, and with abstract and keywords. We hope that both measures together inspire you to send us many more interesting research articles, reviews, forum contributions and reports for publication in the main part of the Bulletin.

- Burrascano S., Caccianiga M. & Gigante, D. (2010): Dry grassland habitat types in Italy. *Bull. Eur. Dry Grassl. Group* 9: 3–10.
- 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.
- Guarino R. (2011): Green landscapes of Sicily. *Bull. Eur. Dry Grassl. Group* 13: 21–25.
- Hegedúsová K. (2009): Devínska Kobyla and Sandberg – National Nature Reserve (Slovak Republic). *Bull. Eur. Dry Grassl. Group* 3: 20–22.
- Isermann M. (2009): Expansion of *Rosa rugosa* in coastal dunes. *Bull. Eur. Dry Grassl. Group* 2: 14–15.
- Mosiyenko I.I., Sudnik-Wójcikowska B. (2010): Kurgans of Ukraine as a refuge of steppe flora. *Bull. Eur. Dry Grassl. Group* 6: 9–13.
- Rodrigo S. & Olea L. (2011): The dehesa: a singular ecosystem. *Bull. Eur. Dry Grassl. Group* 11: 25–28.
- Rūsiņa S. (2008): History of dry grassland research in Latvia. *Bull. Eur. Dry Grassl. Group* 1: 16–21.
- Rūsiņa S. (2009): Current status of dry grassland vegetation research in Latvia. *Bull. Eur. Dry Grassl. Group* 2: 9–13.
- Škodová I. & Hegedúsová K. (2008): Vrchná hora. *Bull. Eur. Dry Grassl. Group* 1: 14–15.
- Uğurlu E. (2010): Dry grassland profile of Turkey. *Bull. Eur. Dry Grassl. Group* 7: 18–22.
- Uğurlu E. & Secmen O. (2009): Kula Vulcao (Turkey). *Bull. Eur. Dry Grassl. Group* 3: 23–25.
- Vrahnakis M. (2010): Dry grassland habitat types of Greece. *Bull. Eur. Dry Grassl. Group* 6: 17–22.

- Vrahnakis M. (2010): Grass-lands as bat-lands: evidence from Mount Varnous, Greece. *Bull. Eur. Dry Grassl. Group* 8: 7–9.
- Vrahnakis M. (2010): Mediterranean Type Ecosystems (MTEs): a brief introduction. *Bull. Eur. Dry Grassl. Group* 6: 14–16.
- Vrahnakis M. (2011): The donkey – a friend of grassland resources that patiently faces ... extinction. *Bull. Eur. Dry Grassl. Group* 10: 14–16.
- Yamalov S. M., Bayanov A. & Muldshev A. (2009): The diversity of steppe communities of South Ural (Republic of Bashkortostan, Russia). *Bull. Eur. Dry Grassl. Group* 3: 14–19.



Tripodion tetraphyllum, Bari, Apulia, Italy.
Photo: Rocco Labadessa, 22 April 2011

Your photos for the Bulletin

For illustrative purposes of the EDGG Bulletin, we always seek nice and informative photos of dry grasslands and their inhabitants throughout Europe. We are particularly searching for photos of **invertebrate and vertebrate animals, fungi, lichens and bryophytes**. If you have such photos and want to see them published in the Bulletin, please send the respective files together with captions (What is on the photo? Where has it been made? Who is the photographer?) to the Editor-in-Chief, Monika Janišová (monika.janisova@savba.sk).



Mown semi-dry basiphilous grassland of the alliance Cirsio-Brachypodium pinnati in the Natura 2000 site ROSCI0295 Dealurile Clujului de Est near Cluj-Napoca, Transylvania, Romania, that holds the world records in vascular plant species richness at the 0.1-m² and 10-m² scales. This photograph was taken during the 1st EDGG Research Expedition and is featured both in Science and in Journal of Vegetation Science. Photo: J. Dengler, 14 July 2009, JD092517

EDGG in Science – Dry grassland beat tropical rainforests as global biodiversity hotspots at small scales

Tropical forests are the biodiversity hotspots – this is often considered as general truth. However, as a brand new paper by Wilson et al. (in press) in *Journal of Vegetation Science* (JVS) – as “Early View” available since 16 March – shows that in the case of vascular plants this is only true for spatial scales from 100 m² onwards. For any grain size below with available data (1 mm² – 49 m²), the global maxima have been recorded in semi-natural (mown or grazed), nutrient poor grasslands of the temperate zones. Except two maximum values from Argentinean pastures, all 13 world records are from European dry grasslands, many of which recorded by EDGG members. More specifically, such extraordinary values are – despite numerous other datasets have been compared – only found in few outstanding dry grassland sites of Europe, each of which holds more than one record: White Carpathians (4 maxima), Transylvania (2 maxima, recorded during the 1st EDGG Research Expedition 2009, see Dengler et al. 2009), and Estonia (2 maxima). These extreme values were all found in semi-dry basiphilous grasslands (order *Brachypodietalia pinnati*, class *Festuco-Brometea*) that experienced long-term use as hay meadows. It is a riddle, why among the generally diverse European grasslands just such types in these few spots are again outstanding by a factor of two or more in richness compared to seemingly similar grassland not far away. The data collected during the past and forthcoming EDGG expeditions might help in the future to shed some light on this...

Now you might ask what the JVS paper has to do with *Science*. Well, the JVS publisher thought that our story about the world records is so exciting that it would be worth some more publicity, and thus launched a press release to science journals and press agencies worldwide. Inter alia, *Science* “took the bait” and interviewed Bob Peet, one of the co-authors of the study and EDGG member. Following this, a short story appeared on *ScienceShot* online on 15 March 2012, entitled *Grazed Grasslands Are Biodiversity Hot Spots*. Well, the title is a bit misleading, as most of the maximum richness grasslands are in fact mown, including the record grassland from Romania shown in *ScienceShot* (see the photo). A more detailed article by Elizabeth Pennisi on that topic will be published on 23 March in *Science* 335 (#6075), probably in the *News* section.

Meanwhile also the German-language science platform scinexx picked up the story: <http://www.scinexx.de/wissen-aktuell-14573-2012-03-19.html>.

And here are three more publications that took the message of European dry grasslands being global hotspots up:

- Anon. (2012): Grazed grasslands biodiverse, too. *Science* 335: 1423, Washington, DC.
- <http://news.nationalgeographic.com/news/2012/03/120320-grasslands-rain-forests-species-diversity-environment>
- <http://www.biodiversity.de/index.php/de/fuer-presse-medien/aktuelles> - news/2632-europaeische-trockenrasen-schlagen-tropische-regenwaelder.

References:

- 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. *Bulletin of the European Dry Grassland Group* 4: 13–19. [FREE from EDGG homepage]
- Pennisi E. (2012): Grazed grasslands are biodiversity hot spots. *ScienceNOW*. URL: <http://news.sciencemag.org/sciencenow/2012/03/scienceshot-grazed-grasslands-ar.html>. [FREE]
- Wilson J.B., Peet R.K., Dengler J. & Pärtel, M. (in press): Plant species richness: the world records. *Journal of Vegetation Science*. URL: <http://onlinelibrary.wiley.com/doi/10.1111/j.1654-1103.2012.01400.x/pdf> [FREE].

Skyros: a very “dry grassland” Greek island

Mike Vrahnakis¹, George Fotiadis² & Yannis Kazoglou³

The article introduces the most important natural elements of Skyros, an island of the Northern Sporades (Greece). Moreover, it emphasizes grazing activity as the major factor that shapes biotic elements and it presents preliminary results of a study, conducted in the framework of a LIFE-Nature project (LIFE09NAT/GR/000323 “Demonstration of the Biodiversity Action Planning approach, to benefit local biodiversity on an Aegean island, Skyros”), concerning the regulation of the intensified livestock husbandry.

Keywords: Skyros, Greece, sheep, goat, LIFE, Action Plan, grazing

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Sculpturing Quercus coccifera. Photo: M. Vrahnakis

Skyros is a small island (20,700 ha, 2500 inhab.) of the Northern Sporades assemblage in the northwest Aegean sea, Greece. It is located some 30 km away from Kymi, the eastern port of Evia island, and some 100 km at the south-eastern end of the well known island of Skiathos. The bedrock is dominated by limestone, metamorphic rocks and alluvial deposits in the middle. The climate is Mediterranean sub-humid (a total of 800 mm of rain in annual basis) with a xerothermic period lasting from April till August.

The vegetation of the island of Skyros is affected by climate, as well as anthropogenic influences like overgrazing, wood overharvesting, man-made fires and wildfires. The vegetation setting of Skyros is characterized by a) chasmophytic, b) high maquis, c) plant communities between maquis and phrygana, d) phrygana, e) pseudomaquis of *Quercus coccifera*, f) maquis of *Oleo-Ceratonion*, assemblages of g) *Quercus ilex* or h) *Acer sempervirens*, i) alepo pine forest, j) fruit-bearing

and olive orchards. It is believed that *Pinus halepensis* was favoured over *Quercus ithaburensis* for wood exploiting purposes. Phrygana is the dominant vegetation type of the south part of the island with *Sarcopoterium spinosum*, *Euphorbia acanthothamnus*, *Genista acanthoclados*, *Thymus capitatus*, *Calicotome villosa* dominating in higher elevations and *Euphorbia dendroides* at the lowest.

Skyros has an exceptional flora of Mediterranean elements and a significant percentage of sub-Mediterranean and pure east-Mediterranean taxa. More than the 20 of the 60 local and Greek endemic plant taxa from the flora of Northern Sporades are found in Skyros, and its adjacent islet of Skyropoula. More than 10 taxa are mentioned by IUCN and Red Data Book. Some of them, like *Aethionema retsina* and *Scorzonera scyria* are

local endemics, while others are also present on a small number of other Aegean islands (like *Campanula merxmülleri* in Psara island).

The majority of the floristic elements of Skyros are directly or indirectly affected by grazing conditions and practices. On the one hand, negative impacts include trampling (e.g. *Aubrieta scyria* which is adapted in roadside habitats where sheep and goats are passing), grazing inside forests of *Quercus coccifera* or *Acer sempervirens* where *Galanthus ikariae* subsp. *snogerupii* grows, or goat grazing in steep rocky slopes where plants of rare species, like *Aethionema retsina* and *Scorzonera scyria*, are found. On the other hand, decreasing grazing activity may result in the encroachment of woody plants (scrub, phrygana) and displacement of weak competitors. In addition severe environmental degradation (soil denudation and erosion, habitat loss and degradation, and a genetic erosion of local endemic, critically endangered wild pony - *Equus caballus* subsp. *skyriano* – population of about 150 individuals) is due to overgrazing.

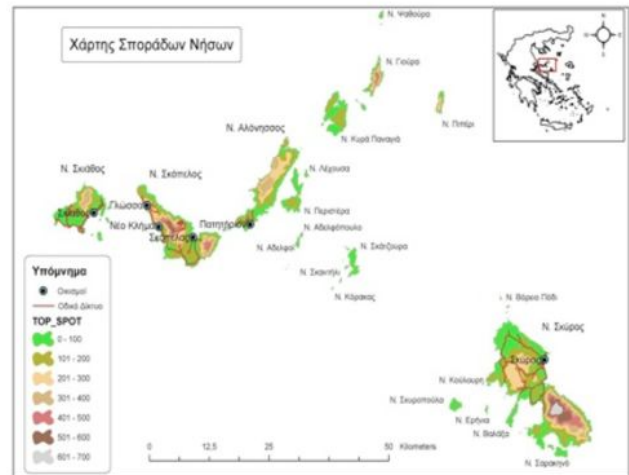


A herd of the famous local endemic wild ponies (*Equus caballus subsp. skyriano*) of Skyros. Photo: K. Intzes

The 4 year project LIFE09NAT/GR/000323 “Demonstration of the Biodiversity Action Planning approach, to benefit local biodiversity on an Aegean island, Skyros» aims to demonstrate integrated planning methods and management measures in order to enhance the biodiversity on the island of Skyros, fulfilling the demand of the local community for an environment rich in biodiversity, compatible with a sustainable economical and social development. One of its specific foci is the demonstration of the feasibility of the revitalization of the traditional island land use model. In this sense the temporal and spatial adjustment of grazing is the highest priority.

The forthcoming Action Plan for grazing adjustment revealed that a reduction of the number of animals (sheep and goats) by 10,000 (from 35,000 to 25,000) is necessary to prevent further degradation. Maintaining this lower stocking density for 30 years would alleviate the negative effects of overgrazing, and support a sustainable rural economy based on local development. Additionally, a series of measures are proposed, including (i) mechanical cleaning (light ploughing) of approx. 500 Ha of phrygana, located on ground of less than 10% slope, satisfying the annual feeding demands of 2600 small animal units, (ii) revitalization of the abandoned terraces on fertile soils and reseeding them with local varieties of wild grasses and legumes, supporting an additional 4800 animals, (iii) the adoption of a system of animal movement throughout the year, starting from the high rocky grasslands early in spring down to phrygana and shrubs in summer, which is expected to benefit the system by adding 480 more small animal units. Other measures such as the adoption of refined grazing systems and the establishment of Kermes oak nuclei in rocky grasslands (important to provide shed and fresh grasses and herbs for pony herds) will improve the grazing situation. In addition, institutional measures like the registration of the south Skyros, where two Natura 2000 sites are located, as a High Nature Value area, the revitalization of a local herders cooperative and the registration of organic farming units and PDO (protected designation of origin, EC 1898/2006) products, and most importantly the implementation of a thorough grazing

management study specialized in the determination of an environmental-friendly grazing activity will produce further added value to traditional livestock husbandry.



North Sporades islands, Skyros is located in the south-eastern corner.



Vegetation gems: phrygana, *Quercus coccifera* and rocky grasslands in Skyros island. Photo: M. Vrahnakis



Clicking natural sounds in Skyros island. Photo: M. Vrahnakis

STIPA: Saving Transylvania's Important Pastoral Agro-Ecosystems

Laura Sutcliffe¹ & Nat Page²

This text presents a brief outline of the LIFE+ project currently being carried out to improve the conservation status of large areas of dry grasslands whilst fostering sustainable local development in Southern Transylvania, Romania.

Keywords: LIFE+, Romania, grassland conservation

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As outlined by the EDGG in Science piece in this Bulletin (p. 8), Transylvanian grasslands contain some of the highest levels of plant species richness in the world. Formed over centuries of low-intensity agricultural use, these grasslands are embedded within High Nature Value farming landscapes and intimately linked to human farming practices.

STIPA is a new LIFE+ project, with co-financing from Orange Romania, focusing on extensive dry grasslands in the Târnavă Mare SCI (Site of Community Importance) - an area of Saxon Transylvania recognized for its natural and cultural heritage. The aim of the project is to improve the conservation status of two Natura 2000 priority habitats, 6210* Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) with important orchid sites, and 6240* Sub-Pannonic steppic grasslands. Preliminary mapping shows that these two habitat types are quite common in the area, covering 5895 ha (approximately 7 % of the whole SCI).

The two main threats to dry grassland habitats in this region are overgrazing in easily accessible areas, and abandonment in more marginal areas. By combining research and mapping to identify the type and location of threats with the application of practical measures, involving local communities, the project aims to ensure the long-term survival of these species-rich grasslands.

Coordinated by the local NGO Fundatia ADEPT Transilvania, this three-year project was started in late 2010 and is currently midway through implementation of measures and gathering the first results from the activities last year. These include:

- Identification of the locations of 6210* and 6240* habitats within the 85,000 ha Târnavă Mare SCI using information from Digital Elevation Models (preselection of sites with a southern and south-western aspect and more than 15% incline), followed by validation on the ground. This approach to use of Digital Elevation Models, developed by project partner Daphne Institute of Applied Ecology (Ján Šeffer, Bratislava) proved very strong in its prediction of target dry-grassland habitats, and thus is an effective way to focus precious field-work in large landscapes.

- Establishing conservation action plans for 6210* and 6240* habitats in the region, based on local practices and the needs of the specific area.

- Establishing conservation priority zonation in the area, identifying particularly threatened or important areas. Some of these areas will be nominated as micro-reserves and simple and practical management agreements will be created in collaboration with land owners.

- Implementing habitat restoration measures. These mainly comprise mowing and scrub clearance using specially acquired low-impact motorized mowers, and assisting farmers in meeting the required conditions for entry into Agri-Environment schemes

- Carrying out awareness-raising activities in schools, and in the farming and wider community. These include educational activities, the distribution of indicator plant and lepidoptera species identification cards and information booklets, and linked to this the involvement of local people in monitoring of results as a means of awareness-raising.

- Working with policy-makers, raising the profile of grassland diversity and providing inputs into the design of national and regional agri-environment schemes for the 2013-2019 period, as well as into the integrated management plan for the Târnavă Mare Natura 2000 site.

This is an example of a large-scale, applied conservation project integrating conservation of dry grassland habitats with support of local farming and livelihoods. The key to protecting this landscape is to work at multiple levels – from mapping based on state of the art ecological knowledge, to educational activities with the local community, to practical conservation interventions such as scrub clearance, to feeding into policy at the regional and national level. It is hoped that the outcomes of this project will be of use to future grassland conservation in Europe, in addition to ensuring the survival of the species-rich grassland landscape in Târnavă Mare.

For more information, please see

<http://www.fundatia-adept.org/?content=lifepus> .



The low-impact mowing machine at work,



Grasslands in flower in the Saxon villages region.



Cristi Gherghiceanu of Fundatia ADEPT doing Brielmeier demonstration, overlooking his village of Viscri.

Forum

The Forum section offers the possibility to our members to post small requests or initiate discussions that might be interesting to other members as well.

Call for collaboration in building the photo repository

Have you visited the website of Saxifraga Foundation www.saxifraga.nl? Saxifraga is a network of European nature photographers who have the intention to facilitate publications in the field of nature protection by providing high quality nature pictures. All pictures (more than 50.000) can be found on this website in a low resolution. These pictures can be downloaded free of charge and can be used for newsletters, bulletins, power point presentations, etc. If you need pictures in a high resolution you can contact Saxifraga at saxifrage@planet.nl. We have a great collection with many species. For example, we have pictures of more than 4.000 European plant species. However, this implies also, that still 8.000 European plant species are missing. Members of the EDGG can contribute substantially to the Saxifraga Collection. In particular many Iberian, Balkan and Central European species are still missing.

All photographers among the members of the EDGG who are willing to cooperate with Saxifraga are very welcome.

Jan van der Straaten, marijkejan@planet.nl

Annali di Botanica announces a call for papers

The Editorial Board of Annali di Botanica - Coenology and Plant Ecology, has dedicated a lot of efforts to raise the Journal standards and to improve its international diffusion. In particular, Annali di Botanica now offers:

- High visibility for maximum global exposure with open access publish mode, through Open Journal Systems (OJS);
- Guaranteed targeted, multidisciplinary audience;
- Rigorous peer review of your research;
- Prompt online publishing of accepted papers;
- DOI (Digital Object Identifier) identification of all the papers published from 2012

Moreover, we inform you that Annali di Botanica - Coenology and Plant Ecology is under evaluation by Thomson Reuters (ISI Web of Knowledge), for the Impact Factor assignment, and has been suggested for

inclusion in Elsevier Scopus titles list. The Journal is already indexed and repertoired in some of the most common databases of scholarly journals (e.g. Journal TOCs, Ulrich's).

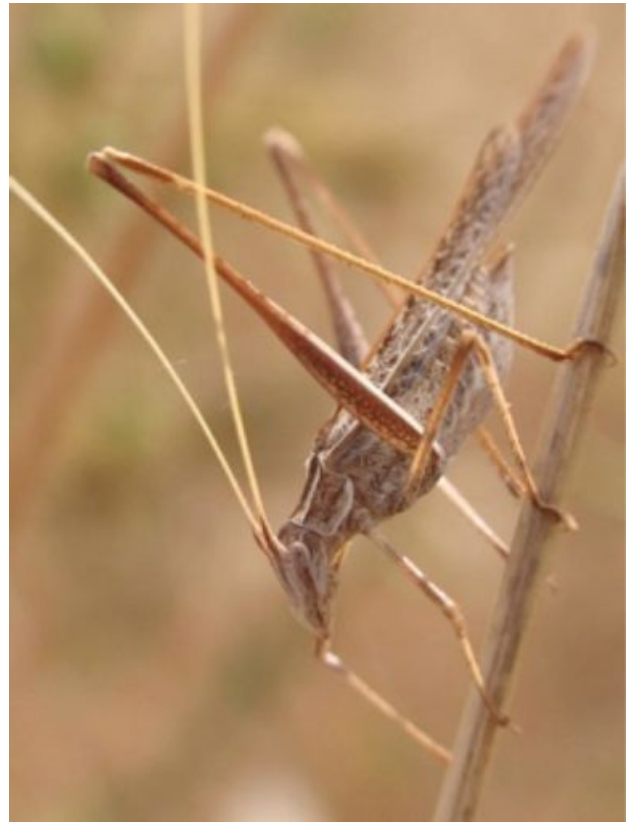
You are invited to submit papers for Volume 2, 2012, in all areas of plant ecology, including coenology, ecophysiology, plant biodiversity, landscape ecology, population ecology, historical biogeography, palaeoecology, phylogeography.

For further details, please visit the Journal website <http://annalidibotanica.uniroma1.it/index.php/Annalidibotanica> or contact the Editorial Secretariat at the address annalidibotanica@uniroma1.it.

Fausto Manes - Editor in Chief

Francesco Spada - Editor

Fabio Attorre - Editor



*Tylopsis liliifolia (male), Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 18 July 2010*

High Nature Value farming in Europe

HNV farming is been at the centre of EU rural development policy for the best part of seven or eight years without there being any reference book on the subject. With the publication of High Nature Value Farming in Europe, EFNCP, with our collaborators IFAB Mannheim, have at last filled that gap. This landmark volume is introduced by joint foreword by Commissioners Dacian Cioloş and Janez Potočnik. It provides a comprehensive introduction to the subject and outlines how the concept can be applied in 35 European states, as described by local experts.

This 500 page volume is richly illustrated throughout with colour photographs, maps and figures.

The book will be available to the public in early 2012 - for up to date information, simply send an email with the subject 'Notify me' to book@efncp.org and we will contact you when it is available.

A chapter list is available at: <http://www.efncp.org/download/hnv-book-chapter-list.pdf>.

Gwyn Jones, EFNCP

Helping hand in fieldwork

A graduate student of my Department would be interested in participating in fieldwork for the analysis of vegetation of dry grasslands, with special reference to the habitat 6210 or similar. She will likely start a PhD next autumn and would like to have an experience in dry grasslands sampling. She would be available for such activities in late June-July-August 2012, I think these months could be ideal for sampling in Central Europe mountain areas.

I think someone among the EDGG members could be interested in training her and have a helping hand in fieldwork, our Department will fund her stay.

Thank you very much in advance.

Sabina Burrascano, sabinaburrascano@gmail.com



Petition to protect Kopacki Rit - the Amazon of Europe

Danube's most valuable and best preserved floodplain system along its entire 2,850 kilometers length is threatened with destruction: the "Kopački Rit" in Croatia. A major project to regulate this unique region is currently in the final stage of decision. **If the project becomes reality, the natural Danube will be transformed into a monotonous canal, with fatal consequences for its wildlife:** The white-tailed eagle, the black stork and the Danube sturgeon would be in severe danger of extinction. Mirela Holy, the Croatian Minister for Environment and Nature Protection, is able to stop these destructive plans. **Help us saving the Danube and sign the petition to the minister now!** Thank you!

See <http://www.amazon-of-europe.com/en/> for the details and signatures.

Claudia Mohl, WWF-Austria



*Zygaena carniolica, Ostuni, Apulia, Italy.
Photo: Rocco Labadessa, 23 May 2009*

*Carlina lanata, Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 18 July 2010*

Book reviews

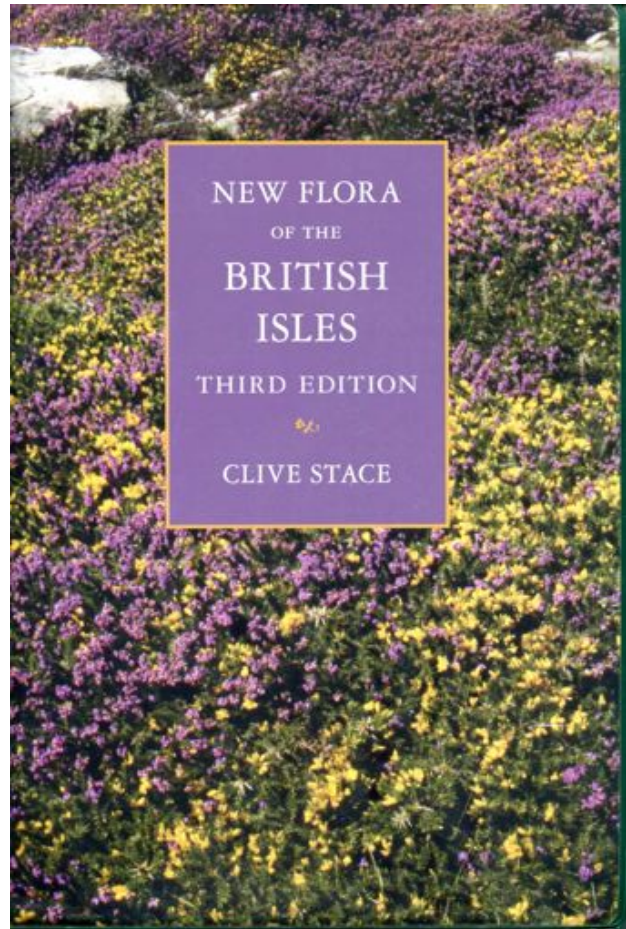
Here we present recently published books that might be relevant for grassland scientists and conservationists, both specific grassland titles as well as faunas, floras, or general books on ecology and conservation biology. If you (as an author, editor or publisher) would like to propose a certain title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

- **Stace, C.A. (2010): New Flora of the British Isles. 3rd ed.** XXXIV + 1232 pp., Cambridge University Press, Cambridge. ISBN 978-0-521-70772-5. Price: 50.00 GBP.

The New Flora of the British Isles by Clive Stace has been referred to as a standard book for identification of wild vascular plants of the British Isles since it first appeared in 1991, and secondly in 1997 (Fröberg 2011). It has received excellent reviews, especially for its information content and organization (e.g. in *Systematic Biology*, *The Irish Naturalist Journal*, *British Wildlife*, *Taxon*). As compared with other floras, it comprises in a concentrate format the information usually provided in large monographs. Valuable descriptions of the families, genera, and species are to be found in it. Furthermore, it does not repeat the information provided by other floras, and fills the gaps of native and alien species that are not described in the British flora.

Compared to its successor, this third edition contains more than 160 new species, resulting in a total of 4,800 taxa of the British flora, as well as a comprehensive diagnose for crop plants, and all known naturalized or casual aliens. Over 1,600 taxa are illustrated by drawings or black-and-white pictures. *The International Code of Nomenclature*, and a new molecular system of classification, namely *The Linear Angiosperm Phylogeny Group III* by Haston et al. (2009) have been used for the revision of classification and nomenclature. Moreover the species frequency and distribution of all taxa were completely revised, and the extinct native taxa and floristic status are mentioned.

A concise and clear introduction explains the content of this book, as it also guides the use of identification keys and interpretation. The inconveniencies and pitfalls of long keys commonly encountered in other floras, when attempting genus identification, are avoided here by splitting the general family keys in shorter supplementary series ones, which facilitate an easiest identification especially for beginners. Species-level identification is facilitated in some cases by multi-access keys (instead of classical dichotomous keys), which prevent users from misidentifications due to the observation difficulties which might arise in case of certain genera (e.g. *Cotoneaster*, *Epilobium*, *Sorbus*). Diagnostic characters



emphasize the clear, contrasting, and easy-to-remember differences between couplets, which determine me to strongly recommend the *Flora* for students' use. Apart from the morphological characteristics, the book provides anatomical features for critical genera (e.g. *Festuca*, *Juncus*). As morphological diagnostic characters relate mainly to flower and fruit, it might cause inconvenience for identification of young specimens. Illustrations increase the value of the *Flora* mostly by the quality of information and, to a lesser extent, by the image condition. Apart from the keys, the drawings and photographs often highlight critical diagnostic characters. In other cases illustrations supplement the key with information related to obvious differences between species, such as the habitus for

Hieracium groups.

Although more experienced reviewers might find few mistakes regarding the content (see Fröberg 2011 for details) the third edition of *The New Flora of British Isles* is a valuable reference for plant identification, which I recommend to any field botanist. Besides the best appreciation, I would encourage it to be used even in the Eastern Europe as it provides information for a wide range of continental species.

References:

Fröberg L. (2011): *New Flora of British Isles*, third edition. *Syst. Biol.* 60: 112–113.

Haston E., Richardson J. E., Stevens, P. F., Chase, M. W. & Harris, D. J. (2009): The Linear Angiosperm Phylogeny Group (LAPG III): a linear sequence of the families in APG III. *Bot. J. Linn. Soc.* 161: 128–131.

Monica Beldean, Cluj-Napoca, Romania
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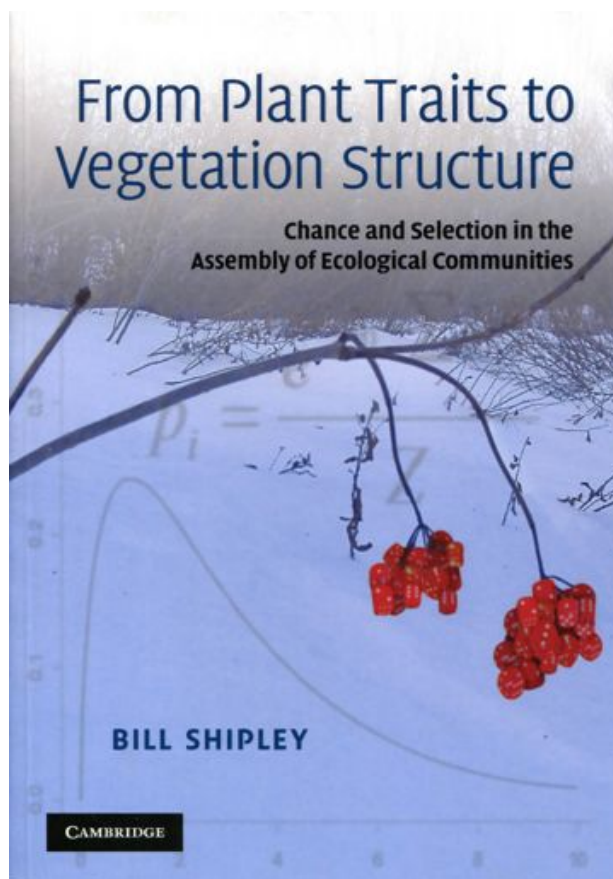
- **Shipley, B. (2010): *From Plant Traits to Vegetation Structure – Chance and Selection in the Assembly of Ecological Communities*.** XI + 277 pp., Cambridge University Press, Cambridge. ISBN 978-0-521-13355-5 (paperback)/978-0-521-11747-0 (hardback). Price: 35.00 GBP (paperback)/75.00 GBP (hardback).

During the last two decades or so, traits gained more and more relevance in plant ecology (from vegetation, through landscape to macroecological levels). Plant traits and plant functional types are the buzzwords here, and functional diversity (FD) in recent years became nearly as important in fundamental and applied discussions about biodiversity as species (compositional) diversity and phylogenetic diversity (PD). Therefore this book addresses a relevant and up-to-date topic.

In the introductory chapter, the author claims that book would be methodological, theoretical, empirical, and synthetic. Yet, my impression is that the methodological and theoretical parts strongly prevail over the two other aspects. To put it short, the book is mainly about modeling of community assembly based on traits. This modeling is done with Bayesian statistics and the Maximum Entropy approach. Accordingly, the text became highly technical and not easily accessible to “ordinary” plant ecologists, with pages full of mathematical formulas or computer code. While there have been numerous nice studies in recent years using trait-based approaches, the author integrates only a handful of practical examples in the whole book. The second major shortfall of the text is that the author nearly exclusively looks into functional diversity, but largely

ignores other dimensions of diversity, even though combining these different aspects such as phylogenetic and functional diversity seems to be a more meaningful approach, particularly when it comes to community assembly. With his final headline *Traits are not enough* the author himself admits this one-sidedness of his approach to some extent. While this book is certainly a valuable source for those colleagues who are programming simulations on community assembly, its value for a wider audience is much limited through its technical presentation and its lack of a more general synthesis.

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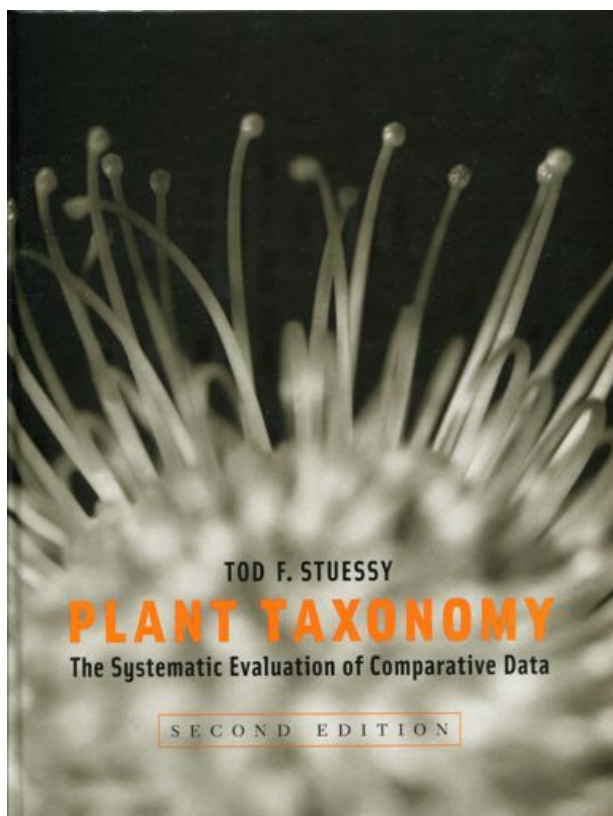
- **Stuessy, T.F. (2009): *Plant Taxonomy – The Systematic Evaluation of Comparative Data*.** 2nd ed. XX + 539 pp., Columbia University Press, New York. ISBN 978-0-231-14712-5. Price: 68.50 GBP.

The second edition of *Plant Taxonomy* was written by Professor Tod F. Stuessy (University of Vienna), one of the most well-known and most published present-day plant taxonomists and Secretary-General of the International Association for Plant Taxonomy (IAPT). This outstanding textbook brings together the history of plant classification with the recent developments due to new high-throughput technologies in genomic analyses, which changed the whole field of plant taxonomy

tremendously. It does this in a language one enjoys to read embedded in an attractive layout. The quality and information content of the many figures exceeds the standards of other recent textbooks, despite using only black and white. The book is completed by an enormous, but nevertheless well-selected list of references cited in the text, which covers not less than 130 pages!

The book starts with the sentence *Taxonomy is dynamic, beautiful, frustrating, and challenging all at the same*, which can be considered programmatic for the whole presentation. The text is organized in two major parts, comprising five sections and 26 chapters. Part I deals with the *Principles of Taxonomy*. The first section (36 pp.), *The Meaning of Classification*, introduces the terminology, the relevance of systematics, and the universality of classification. The major second section (93 pp.) is devoted to the *Different Approaches to Biological Classification*. Here the first four chapters explain the major approaches applied in the history of classification, from the artificial, through the phyletic and phenetic to the cladistic approach, culminating in Chapter 9, which evaluates the three last approaches comparatively. Section 3 (51 pp.) deals with the philosophy of the taxonomic hierarchy and presents the concepts and applications of the hierarchical levels from forms through species to families and beyond. Part II is on *Taxonomic Data* and consists of Section 4, which describes the various types of data used by taxonomists, from morphology through genetics to ecology (10 chapters, 156 pages), and the final section, which deals with the gathering, storage and presentation of data (20 pages).

In summary, this is a highly recommendable book both because of its relevance and its excellent presentation. It should be on the shelf of any serious botanist, be it a taxonomist, who can learn from Stuessy that even in the 21st century taxonomy is much, much more than just applying cladistics to huge genomic datasets, and to the non-taxonomist who gets an easy and well-balanced



access to this subject, which might have changed more during the recent two decades than any other biological discipline. The author is an outstanding missionary for his statement that *Taxonomy is one of the most important of the biological sciences*; indeed, he could convincingly fill this claim of the Epilogue with his vivid presentation in the preceding text. Present-day, open-minded taxonomy is indispensable if biological science is to achieve during the next decades the complete organismic inventory of the planet as a Web-based *Encyclopedia of Life* (as outlined by Stuessy in his Preface).

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Recent publications of our members

*With this section, whose content will also be made available on our homepage, we want to facilitate an overview of **dry grassland-related publications** throughout Europe and to improve their accessibility. You are invited to send lists of such papers from the last three years following the style below to monika.janisova@savba.sk and rusina@lu.lv. We will include your e-mail address so that readers can request a pdf; in case you have the full copy-right we also can post a pdf on the EDGG homepage. As, within EDGG, we plan to publish a book about the European dry grasslands at some point in the future, we would appreciate if you send a pdf (or offprint) of each of your dry grassland publications to dengler@botanik.uni-hamburg.de.*

Uğurlu E. & Oldeland J. (2012): Species response curves of oak species along climatic gradients in Turkey. *Int J Biometeorol.* 56:85-93 DOI 10.1007/s00484-010-0399-9

Wilson J. B., Peet R. K., Dengler J. & Pärtel M. (in press): Plant species richness: the world records. *Journal of Vegetation Science*. URL: <http://>

onlinelibrary.wiley.com/doi/10.1111/j.1654-1103.2012.01400.x/pdf [FREE]

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Forthcoming events

4th EDGG Research Expedition
Vegetation and diversity of dry grasslands of Sicily
29 March – 5 April 2012, Sicily, Italy

9th European Dry Grassland Meeting
Dry grasslands of Europe: grazing and ecosystem services
19–23 May 2012, Prespa, Greece
www.edgg.org/edgg_meeting.html

21st Workshop of the European Vegetation Survey (EVS) and 11th Meeting on Vegetation Databases
24–28 May 2012, Vienna, Austria
<http://evs2012.vinca.at/index.shtml>

International conference “Steppe habitats of Europe”
3–6 June 2012, Erfurt, Germany
Deadline for registration and poster abstract submission: 30 April 2012
<http://www.thuringen.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>

Plant Kingdom in the Red Data Book of Ukraine: Implementation of the Global Strategy for Plant Conservation
9–12 October 2012, Uman, Ukraine
Contact: Mykyta Peregrym,
E-mail: iamz@iamz.ciheam.org

6th Biennial Conference of the International Biogeography Society in Florida, USA
January 9–13, 2013, Florida, USA
Registration and abstract submission for symposia, contributed papers and posters will open in July 2012.
<http://www.biogeography.org/html/Meetings/2013/index.html>

22nd International Grassland Congress
Revitalising grasslands to sustain our communities
September 15–19, 2013 in Sydney, Australia
<http://www.igc2013.com/pages/registration.php>

Biarum tenuifolium, Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 19 September 2010



Neohipparchia statilinus, Alta Murgia, Apulia, Italy.
Photo: Rocco Labadessa, 18 July 2010

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 (808 members from 52 countries as of 10 March 2012) and alongside with all previous issues it is also freely available at <http://www.edgg.org/publications.htm>. Bulletin 14 (2012) of the EDGG was published on 26 March 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.

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Important dates: The deadline for Bulletin 15 is 31 May 2012

Bulletin 15 to appear: June 2012

Bulletin 16 to appear: September 2012