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Dry grassland of Europe: biodiversity, classification, conservation and management – Editorial to the 8th Dry Grassland Special Feature

Trockenrasen Europas: Biodiversität, Klassifikation, Naturschutz und Management – Vorwort zum 8. Trockenrasen-Sonderteil

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Zusammenfassung

Der diesjährige 8. Trockenrasen-Sonderteil von *Tuexenia* beginnt mit einen Bericht über die aktuellen Aktivitäten der *European Dry Grassland Group* (EDGG). Zunächst geben wir einen Überblick über die Entwicklung der Mitgliederzahl und den aktuellen Vorstand, der im Mai 2013 gewählt wurde. Dann berichten wir vom letzten *European Dry Grassland Meeting* in Prespa (Griechenland, 2012) und informieren über künftige Tagungen und Forschungsexpeditionen der EDGG. Schließlich war und ist die EDGG sehr aktiv darin, *Special Features* in internationalen Fachzeitschriften herauszugeben. Im zweiten Teil des Vorwortes geben wir eine Einführung zu den sechs Artikeln des diesjährigen Trockenrasen-Sonderteils: Zwei davon beschäftigen sich Biodiversitätsanalyen von Grasland-Ökotonen in einer Flusslandschaft in Lettland bzw. von brachgefallenen Alvar-Trockenrasen in Estland. Der dritte Artikel behandelt die Ökologie und Vergesellschaftung einer Grassippe (*Avenula adsurgens* subsp. *adsurgens*) im brachgefallenen, montanen Grasland der Karpaten (Slowakei). Die letzten drei Artikel schließlich sind der Beschreibung und Syntaxonomie von Trockenrasen gewidmet: Zwei davon bilden den Start einer neuen Serie über die pannonischen Trockenrasen Österreichs (Allgemeine Einführung und Trockenrasen des Wienerwalds), während der letzte die Ergebnisse der dritten EDGG-Forschungsexpedition im Jahr 2011 nach Bulgarien präsentiert. Schließlich geben wir einen Ausblick über künftig Pläne für das *Special Feature*.

1. Introduction

This Special Feature is the eighth in a series of such collections of papers devoted to dry grasslands and edited by members of the *European Dry Grassland Group* (EDGG; http://www.edgg.org) or its predecessor *Arbeitsgruppe Trockenrasen* that have been published in *Tuexenia* since 2005 (see overview by GALVÁNEK et al. 2012). The EDGG is a net-

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work of researchers and conservationists, both botanists and zoologists, dealing with Palaearctic dry grasslands and steppes and became a Working Group of the *International Association for Vegetation Science* (IAVS; http://www.iavs.org) in 2009 (for detailed background, see VRAHNAKIS et al. 2013a). With this Editorial we want to give an up-to-date overview of the EDGG and its activities and introduce the contributions included in the present Special Feature.

2. News from the European Dry Grassland Group (EDGG)

2.1 Members and organisation of the EDGG

Since the last report in *Tuexenia* (GALVÁNEK et al. 2012), the steady growth of the EDGG has continued to reach a new total of 949 members from 58 countries (as of 15 July 2013), including an increasing number from continents other than Europe. At the IAVS Symposium in Mokpo, South Korea, in 2012, the EDGG bylaws have been formally approved so that the EDGG has now access to financial support granted by IAVS to its working groups. In May 2013 the elections to the EDGG Executive Committee for the period 2013–2015 took place, resulting in a re-election of the previous officers (see detailed list under http://www.edgg.org). The regional EDGG subgroup for Germany, the *AG Trockenrasen*, recently installed a new team of contact persons, Thomas Becker (beckerth@uni-trier.de) and Ute Jandt (ute.jandt@botanik.uni-halle.de), while the governance of all other subgroups remained unchanged.

2.2 European Dry Grassland Meetings and other EDGG events

The 9th European Dry Grassland Meeting took place in Prespa, NW Greece, 19–23 May 2012, upon invitation of Michael Vrahnakis and jointly organised with the Hellenic Range and Pasture Society. More than 120 scientists from various countries participated (Fig. 1) and presented 22 talks and 101 posters. In addition to an interesting scientific programme, the participants could enjoy three excursions to the varied dry grassland habitats of the surrounding mountains and a grassland party with folk music, folk dance and local food. Meanwhile, a selection of conference contributions has been published as proceedings (VRAHNAKIS et al. 2013b).

The 10th European Dry Grassland Meeting took place in Zamość, Poland, only recently (24–31 May 2013) and will therefore be presented in detail in the Special Feature of 2014. The forthcoming EDGG events are (detailed information available at http://www.edgg.org):

- 6th EDGG Research Expedition to the Altai Mts., Russia, 21 July – 1 August 2013
- Conference "Concepts for modern management of xeric grasslands between nature conservation and agriculture" (co-organised by EDGG), Criewen Castle, Schwedt (Oder), Germany, 26–27 September 2013
- Open Landscapes 2013 Conference (co-organised by EDGG), Hildesheim, Germany, 29 September – 3 October 2013
- 11th European Dry Grassland Meeting, Tula, Russia, 5–9 June (+ excursion 10–15 June) 2014
- 7th EDGG Research Expedition to Northern Spain, summer 2014
- 12th European Dry Grassland Meeting, Mainz, Germany, summer 2015



Fig. 1. Participants of the 9th European Dry Grassland Meeting 2012 in Prespa (Greece) (Photo: Y. Kazoglou).

Abb. 1. Teilnehmer des 9. European Dry Grassland Meeting 2012 in Prespa (Griechenland) (Foto: Y. Kazoglou).

2.3 Publication activities of the EDGG

In addition to its homepage (http://www.edgg.org), EDGG publishes its own electronic journal, the *Bulletin of the European Dry Grassland Group*, which appears four times a year. It is a full-colour open access journal, which is freely available from http://www.edgg.org/publications.htm and from the server of the German National Library. It mainly contains reports from EDGG activities and announcements of EDGG members as well as overviews and reviews of new dry grassland-related conferences and publications. However, the option for regular scientific articles (original articles, reports, forum contributions and reviews) has recently been strengthened.

A particularly strong point of the EDGG is to organise Special Features/Issues in national and international journals. In the past EDGG has not only edited seven collections of papers on dry grasslands in *Tuexenia*, but also three in other journals: *Kieler Notizen zur Pflanzenkunde in Schleswig-Holstein und Hamburg* (2004), *Arbeiten aus dem Institut für Landschaftsökologie in Münster* (2006) and *Plant Biosystems* (JANIŠOVÁ et al. 2011). In addition to the *Tuexenia* Special Feature at hand, four other Special Issues/Features are presently in preparation. The first one in *Applied Vegetation Science*, a joint Virtual Special Feature (VSF) with the *European Vegetation Survey* (EVS; http://euroveg.org/), will present modern large-scale classifications of various grassland types (not only dry grasslands) in various parts of Europe as a major contribution towards a consistent classification scheme at continental scale. This VSF has just been opened with an editorial (DENGLER et al. 2013) and a comprehensive study of all saline grasslands in Southeast Europe (ELIAŠ et al. 2013). Sec-

ondly, a Special Issue of *Biodiversity and Conservation* has recently been completed (HABEL et al. in press a), and the print version will probably become available in autumn 2013. It comprises 16 case studies of plant, fungal and animal diversity at different organisational levels – from genetic diversity to landscape diversity – plus a forum contribution that asks how conservation practice could better benefit from basic and applied biodiversity research (HABEL et al. in press b). Another Special Issue on more fundamental questions of plant diversity patterns in Palaearctic grasslands is in preparation for *Agriculture, Ecosystems and Environment*, where first articles have appeared online first (e.g. REITALU et al. in press, ZEITER et al. in press). Finally, the second 2013 issue of the Slovenian journal *Hacquetia* will be an EDGG-edited Special Issue devoted to Mediterranean and sub-Mediterranean dry grasslands.

2.4 Other EDGG activities during the last year

Thanks to financial support from IAVS, EDGG was able to provide fellowships to two young scientists from Eastern Europe, Anna Kuzemko from Ukraine and Kiril Vassilev from Bulgaria, which allowed them to stay in the group of EDGG chair Jürgen Dengler for several weeks. They took the opportunity to work jointly on the preparation and analysis of the data from the second and third EDGG Research Expedition, resulting in two publications: PEDASHENKO et al. (2013) in this issue and a similar paper by A. Kuzemko et al., which is in preparation.

The EDGG and its regional subgroups are also active regarding the establishment of national and supranational databases of grassland relevés, mostly stipulated by planned classification studies for the VSF of *Applied Vegetation Science*, but sometimes also in connection with other analyses (see VRAHNAKIS et al. 2013b). In July 2013 the EDGG made an agreement with the Braun-Blanquet project of the EVS (http://euroveg.org/projects) and the BiodivERsA project SIGNAL (http://www.bayceer.uni-bayreuth.de/signal/) to establish a comprehensive *European Grassland Archive* (EGA) fed by national and regional databases from all over Europe (contact: J.D.). The EGA Consortium envisages the first pan-European analyses (classifications, parameterisation of syntaxa, biodiversity patterns) with a preliminary dataset becoming possible in early 2014. Also, the plan of a comprehensive national dry grassland database for Germany, which originally gave rise to the *AG Trockenrasen* (DENGLER & JANDT 2005), is being reconsidered (JANDT et al. 2013), but needs much additional input beyond the three current promoters to become truly productive.

3. Introduction to the present Special Feature

The six articles presented within this Special Feature were written by 29 authors from eight European countries: Austria (9 authors), Bulgaria (6), Estonia (4), Latvia (3), Slovakia (3), Germany (2), Czech Republic (1) and Switzerland (1). In addition to the broad geographical range of authors, the six articles also cover a broad range of study regions and topics. Two articles are analysing biodiversity patterns in grasslands of the Baltic countries (KASARI et al. 2013, RŪSIŅA et al. 2013), one studies the ecology of a grassland species in Carpathian grasslands (JANIŠOVÁ et al. 2013), and the final three are dealing with the syntaxonomy of dry grasslands in Central and Southeast Europe (PEDASHENKO et al. 2013, WILLNER et al. 2013a, b).

KASARI et al. (2013) analysed how moderate shrub encroachment influences small-scale diversity and species composition in alvar grasslands of Estonia. While previous studies had shown that shrub cover of more than 70% rapidly decreases alvar grassland species richness (REJMÁNEK & ROSÉN 1992), little was known about the effects of low shrub cover (up to 30%) on environmental conditions and species richness in alvar grasslands. KASARI et al.'s (2013) detailed field study in 33 grassland stands on the islands of Saaremaa and Muhu found that total species richness and even more so individual species groups are indeed affected by a low shrub cover in this rare and species-rich type of calcareous grassland.

RŪSIŅA et al. (2013) studied different diversity components (α, β and γ diversity) in transitional areas between dry and wet grasslands in riverine landscapes in Latvia. Their study is especially interesting because transitions between structurally similar communities (e.g. grassland-grassland) have so far mostly been studied on large scale using unconnected plots (e.g. BECKER et al. 2012) but seldom on small scale using connected plots. RŪSIŅA et al. (2013) emphasise the importance of management for the ecotonal processes and suggest that destroying transitional areas between dry and wet grasslands by levelling the ground or by abandonment of management practices will decrease habitat heterogeneity and negatively affect the biodiversity of riverine landscapes.

The paper by JANIŠOVÁ et al. (2013) deals with the phytosociological affiliation, habitat preferences, ecological requirements and clonal behaviour of *Avenula adsurgens* subsp. *adsurgens* in Central Slovakia. This taxonomically difficult grass taxon inhabits dry and warm habitats in the colline to montane belt with the preference of south-facing slopes, but details of its ecology and coenology were unknown. That is why JANIŠOVÁ et al.'s (2013) work fills a gap of knowledge about an often dominant grass of wide distribution in Central and South Eastern Europe.

The contributions by WILLNER et al. (2013a, 2013b) are intended to be the start of a series of papers, which in the end should lead to a comprehensive syntaxonomic revision of all the grasslands in the Pannonian part of Austria. They can build on several other recent papers on xerothermic herbaceous vegetation of the Pannonian region (DÚBRAVKOVÁ et al. 2010, ŠKODOVÁ et al. 2011, WILLNER 2011). WILLNER et al.'s (2013a, 2013b) contributions nicely demonstrate that for a real advancement towards syntaxonomic systems that are ecologically meaningful and consistent, one needs both good data and knowledge at regional scale and an excellent overview of "what is going on" in other parts of Europe. WILLNER et al. (2013b), for example, demonstrate that the community type that had been referred to as *Onobrychido-Brometum* within the subatlantic *Bromion erecti* in eastern Austria, from a larger-scale perspective belongs to the subcontinental *Cirsio-Brachypodion* and thus another association.

PEDASHENKO et al. (2013) is the first publication from the third EDGG Research Expedition to NW Bulgaria in summer 2011. It is therefore a follow-up (with identical sampling design) of DENGLER et al. (2012), who analysed the data from the first EDGG Expedition 2009 to Transylvania with respect to biodiversity patterns and syntaxonomy. While the expedition in Transylvania found extraordinarily species-rich communities including some of the present world records (WILSON et al. 2012), the richness of syntaxonomically corresponding stands in NW Bulgaria was clearly lower despite the relatively high spatial proximity. Despite being based on a small dataset, the Bulgarian study is an important contribution towards consistent classification of Bulgarian grasslands resulting also in the first documentation of the *Violion caninae* from Bulgaria.

4. Outlook

With this issue, Jürgen Dengler, who has been the chair of the guest editors since the beginning, is handing over the responsibility to Thomas Becker, who will lead the team of guest editors in the next years and continue the successful "model" of the Special Features based on the agreement between FlorSoz and EDGG. As in previous years, submissions to the Special Features generally require a positive pre-evaluation of the abstract; only persons who published at least two articles in *Tuexenia* Dry Grassland Special Features can submit directly to T.B. In 2014 our Special Feature in *Tuexenia* will concentrate on fundamental research in European dry grasslands, while papers on conservation and management issues should be directed to a parallel Special Issue of *Hacquetia* (contact: J.D.).

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References

BECKER, T., SCHMIEGE, C., BERGMEIER, E., DENGLER, J. & NOWAK, B. (2012): Nutrient-poor grasslands on siliceous soil in the lower Aar valley (Middle Hesse, Germany) – neglected vegetation types in the intersection range of four classes. – Tuexenia 32: 281–318.

DENGLER, J. & JANDT, U. (2005): Arbeitsgruppe „Trockenrasen" gegründet – Bericht von der ersten Jahrestagung unter dem Motto „Trockenrasen als Biodiversitätshotspots". – Tuexenia 25: 375–378.

DENGLER, J., BECKER, T., RUPRECHT, E., SZABÓ, A., BECKER, U., BELDEAN, M., BITA-NICOLAE, C., DOLNIK, C., GOIA, I., PEYRAT, J., SUTCLIFFE, L.M.E., TURTUREANU, P.D. & UĞURLU, E. (2012): *Festuco-Brometea* communities of the Transylvanian Plateau (Romania) – a preliminary overview on syntaxonomy, ecology, and biodiversity. – Tuexenia 32: 319–359 + 2 tables.

DENGLER, J., BERGMEIER, E., WILLNER, W. & CHYTRÝ, M. (2013): Towards a consistent classification of European grasslands. – Appl. Veg. Sci. 16: 518–520.

DÚBRAVKOVÁ, D., HEGEDÜŠOVÁ, K., JANIŠOVÁ, M. & ŠKODOVÁ, I. (2010): New vegetation data of dry grasslands in the Western Carpathians and the northern Pannonian Basin. – Tuexenia 30: 357–374 + 1 table.

ELIÁŠ, P. JR., SOPOTLIEVA, D., DÍTÉ, D., HÁJKOVÁ, P., APOSTOLOVA, I., SENKO, D., MELEČKOVÁ, Z. & HÁJEK, M. (2013): Vegetation diversity of salt-rich grasslands in Southeast Europe. – Appl. Veg. Sci. 16: 521–537.

GALVÁNEK, G., BECKER, T. & DENGLER, J. (2012): Biodiversity, syntaxonomy, and management – Editorial to the 7th Dry Grassland Special Feature (with a bibliometrical evaluation of the series). – Tuexenia 32: 233–243.

HABEL, J.C., DENGLER, J., JANIŠOVÁ, M., TÖRÖK, P., WELLSTEIN, C. & WIEZIK, M. (in press a): European grassland ecosystems: threatened hotspots of biodiversity. – Biodivers. Conserv. DOI: 10.1007/s10531-013-0537-x.

HABEL, J.C., GOSSNER, M.M., MEYER, S., EGGERMONT, H., LENS, L., DENGLER, J. & WEISSER, W.W. (in press b): Mind the gaps when using science to address conservation concerns. – Biodivers. Conserv. DOI: 10.1007/s10153-013-0536.y.

JANDT, U., BECKER, T. & DENGLER, J. (2013): Dry grasslands of Germany – call to support an initiative for a consistent, plot-based classification. – In: BAUMBACH, H. & PFÜTZENREUTER, S. (Eds.): Steppenlebensräume Europas – Gefährdung, Erhaltungsmaßnahmen und Schutz. Thüringer Ministerium für Landwirtschaft, Forsten, Umwelt und Naturschutz, Erfurt.

JANIŠOVÁ, M., BARTHA, S., KIEHL, K. & DENGLER, J. (2011): Advances in the conservation of dry grasslands – Introduction to contributions from the 7th European Dry Grassland Meeting. – Plant Biosyst. 145: 507–513.

JANIŠOVÁ, M., UJHÁZY, K. & UHLIAROVÁ, E. (2013): Phytosociology and ecology of *Avenula adsurgens* subsp. *adsurgens* in Carpathian grasslands. – Tuexenia 33: 371–398.

KASARI, L., GAZOL, A., KALWIJ, J.M. & HELM, A. (2013): Low shrub cover in calcareous grasslands increases total small-scale diversity by promoting the occurrence of generalist species. – Tuexenia 33: 293–308.

PEDASHENKO, H., APOSTOLOVA, I., BOCH, S., GANEVA, A., JANIŠOVÁ, M., SOPOTLIEVA, D., TODOROVA, S., ÜNAL, A., VASSILEV, K., VELEV, N. & DENGLER, J. (2013): Dry grasslands of NW Bulgarian mountains: first insights into diversity, ecology and syntaxonomy. – Tuexenia 33: 309–346.

REITALU, T., HELM, A., PÄRTEL, M., BENGTSSON, K., GERHOLD, P., ROSÉN, E., TAKKIS, K., ZNAMENSKIY, S. & PRENTICE, H. C. (in press): Determinants of fine-scale plant diversity in dry calcareous grasslands within the Baltic Sea region. – Agric. Ecosyst. Environ. DOI: 10.1016/j.agee.2012.11.005.

REJMÁNEK, M. & ROSÉN, E. (1992): Influence of colonizing shrubs on species-area relationships in alvar plant-communities. – J. Veg. Sci. 3: 625–630.

RŪSIŅA, S., PUŠPURE, I. & GUSTIŅA, L. (2013): Diversity patterns in transitional grassland areas in floodplain landscapes with different heterogeneity. – Tuexenia 33: 347–369.

ŠKODOVÁ, I., DEVÁNOVÁ, K. & SENKO, D. (2011): Subxerophilous and mesophilous grasslands of the Biele Karpaty Mts. (White Carpathian Mts.) in Slovakia. – Tuexenia 31: 235–269 + 6 tables.

VRAHNAKIS, M.S., JANIŠOVÁ, M., RŪSIŅA, S., TÖRÖK, P., VENN, S. & DENGLER, J. (2013b): The European Dry Grassland Group (EDGG): stewarding Europe's most diverse habitat type. – In: Baumbach, H., Pfützenreuter, S. (Eds.): Steppenlebensräume Europas – Gefährdung, Erhaltungsmaßnahmen und Schutz (in press). Thüringer Ministerium für Landwirtschaft, Forsten, Umwelt und Naturschutz, Erfurt.

VRAHNAKIS, M.S., KYRIAZOPOULOS, A.P., CHOUVARDAS, D. & FOTIADIS, G. (Eds.) (2013a): Dry grasslands of Europe: grazing and ecosystem services. – Hellenic Rangeland and Pasture Society.

WILLNER, W. (2011): Unambiguous assignment of relevés to vegetation units: the example of the *Festuco-Brometea* and *Trifolio-Geranietea sanguinei*. – Tuexenia 31: 271–282 + 1 table.

WILLNER, W., SAUBERER, N., STAUDINGER, M., GRASS, V., KRAUS, R., MOSER, D., RÖTZER, H. & WRBKA T. (2013a): Syntaxonomic revision of the Pannonian grasslands of Austria – Part II: Vienna Woods (Wienerwald). – Tuexenia 33: 421–458.

WILLNER, W., STAUDINGER, M., SCHRATT-EHRENDORFER, L., SAUBERER, N., MOSER, D., GRASS, V., KRAUS, R., RÖTZER, H. & WRBKA, T. (2013b): Syntaxonomical revision of the Austrian Pannonic grasslands – Part I: brief overview and grasslands of the Vienna Woods (Wienerwald). – Tuexenia 33: 399–420.

WILSON, J.B., PEET, R.K., DENGLER, J. & PÄRTEL, M. (2012): Plant species richness: the world records. – J. Veg. Sci. 23: 796–802.

ZEITER, M., PREUSCHKAS, J. & STAMPFLI, A. (in press): Seed availability in hay meadows: Land-use intensification promotes seed rain but not the persistent seed bank. – Agric. Ecosyst. Environ. DOI: 10.1016/j.agee.2013.03.009.

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