

Invitation to contribute to the vegetation-plot databases of EDGG



GrassPlot — the new EDGG database of high-quality grassland plot observations from the whole Palaeartic

The **Database of Scale-Dependent Phytodiversity Patterns in Palaeartic Grasslands (GrassPlot)** was established on 10 March 2017 in Bayreuth during an international workshop organized by Jürgen Dengler and supported by the BayIntAn program of the Bavarian Research Alliance (BayFor) and BayCEER (Fig. 1).

GrassPlot is a collaborative initiative within the framework of the Eurasian Dry Grassland Group (EDGG). The GrassPlot database succeeds the former database of nested-plot data from grasslands in Europe founded in 2010, which consisted mainly of the data collected during the EDGG Research Expeditions/Field Workshops. Now the scope of GrassPlot has

been widened (see below), and everyone with suitable data can join the Consortium. The purpose of GrassPlot is to establish and maintain a common data repository of high-quality vegetation-plot observations (relevés) of grasslands and related vegetation types from the whole Palaeartic biogeographic realm, and to facilitate the use of these data for non-commercial purposes, mainly academic research and applications in nature conservation and ecological restoration.

The GrassPlot database aims at complementing existing broad-scale vegetation databases such as the European Vegetation Archive (EVA) and the global database “sPlot”. Data suitable for GrassPlot and EVA/sPlot should preferably be contributed both to GrassPlot and an EVA/sPlot member database (see call to contribute to some of such databases in this Bulletin at p.16). The special focus of GrassPlot is on **multi-scale and multi-taxon sampling in precisely delimited plots with extensive environmental data**.

During the GrassPlot workshop in Bayreuth, the participants developed Bylaws aiming at balancing the interests of data providers and data users in a fair and transparent manner.



Fig. 1. Participants of the GrassPlot Workshop I. Left to right: back row: Santiago Soliveres, Viktoria Wagner, Idoia Biurrun, Itziar García-Mijangos, Timo Conradi, Manuel Steinbauer; middle row: Alireza Naqinezhad, Goffredo Filibeck, David Storch, Riccardo Guarino, Jürgen Dengler, Monika Janišová; front: Iwona Dembicz.

The data owners can decide on the data access regime of their data; either restricted, semi-restricted or free. Persons who are willing to contribute their own published or unpublished plot records or plot records of other authors which they digitised from the literature can apply to become a member of the GrassPlot Consortium. Data must be provided in an electronic format, but exceptionally unpublished data in paper format will be accepted if they fill important gaps.

Obligatory requirements for data contributions to GrassPlot are

- (a) origin in the Palearctic biogeographic realm;
- (b) grassland vegetation in the wide sense, i.e. terrestrial and semi-terrestrial vegetation types dominated by hemicryptophytes, therophytes, geophytes, and occasionally bryophytes, lichens and chamaephytes (forests, shrublands, aquatic, ruderal and segetal vegetation are not considered);
- (c) careful sampling of precisely delimited plots with the aim of complete species lists;
- (d) providing details of sampling methodology (in particular, whether rooted or shoot presence was recorded and which plot shape was used); and
- (e) meeting one of the following criteria (or a combination of these): (i) data for one or several of our eight standard grain sizes (0.0001; 0.001 or 0.0009; 0.01; 0.1 or 0.09; 1; 10 or 9; 100; 1000 or 900 or 1024 m²) or (ii) nested-plot series with at least four different grain sizes.

Additional desired (but not obligatory) criteria

- (f) precise GPS coordinates;

- (g) complete sampling of one or several macroscopic non-vascular taxa of the terricolous vegetation (bryophytes, lichens, “algae”) in addition to vascular plants;

- (h) multi-scale, nested-plot sampling;

- (i) direct cover estimates of species in percent for at least one grain size; and

- (j) extensive environmental variables measured or determined at the plot scale (vegetation structure, topography, soil, land use).

GrassPlot is represented and governed by its Governing Board elected by the GrassPlot Consortium for two-year renewable terms. The first Governing Board for the period March 2017 – March 2019 consists of Idoia Biurrun (ES), Timo Conradi (DK/DE), Iwona Dembicz (PL), Jürgen Dengler (DE), Riccardo Guarino (IT), Alireza Naqinezhad (IR) and Viktoria Wagner (CZ/AT), with Jürgen Dengler being Custodian and Idoia Biurrun Deputy Custodian.



Fig. 2. Distribution of GrassPlot data (as of 14th April 2017) in the Palearctic biogeographic realm (Source of base map: GoogleEarth).

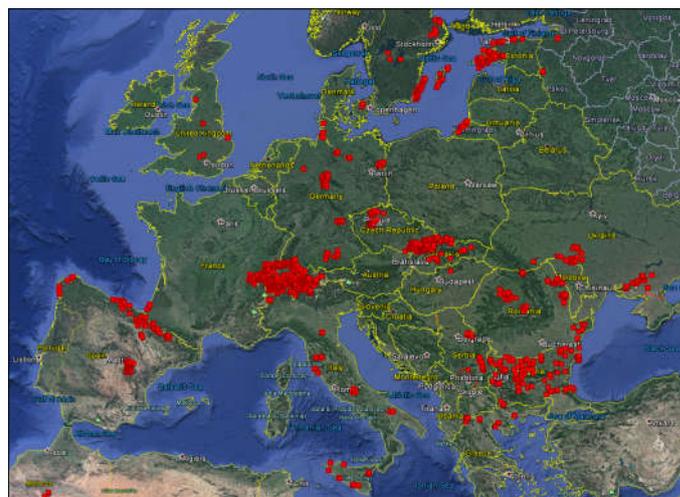


Fig. 3. The highest density of GrassPlot data is currently in hemiboreal-temperate-submediterranean Europe (Source of base map: GoogleEarth).

Current content of GrassPlot

By now (14th April 2017), already a substantial amount of data has been collected in GrassPlot (Figs. 2, 3), including 82 datasets from 107 data owners and 28 countries. They comprise 26,682 plots with vascular plant data, of which 12,278 plots have also data on bryophytes and lichens, as well as 1,132 nested-plot series (with at least four grain sizes).

Opportunities of GrassPlot and invitation to join

The establishment of the GrassPlot database opens new opportunities for extensive studies on grassland ecology and biodiversity in the Palaeartic realm. The members of the GrassPlot Consortium are informed about and invited to forthcoming paper projects using the GrassPlot data and they can propose paper projects themselves. **You are welcome to join the GrassPlot Consortium with your data meeting the GrassPlot criteria to advance science and to take advantage of these benefits!** Data that are **contributed by 14 May 2017** at the latest can still be considered for the first two GrassPlot publications, and their owners will become co-authors.

For further information on the GrassPlot project and database, please visit the GrassPlot webpage at http://www.bayceer.uni-bayreuth.de/ecoinformatics/en/grassplot/gru/html.php?id_obj=139267 or contact database custodians Jürgen Dengler and Idoia Biurrun.

Other vegetation-plot databases associated with EDGG

While the **Database of Scale-Dependent Phytodiversity Patterns in Palaeartic Grasslands (GrassPlot)** is the central EDGG database for high quality relevés from grasslands throughout the whole Palaeartic biogeographic realm (see previous report on GrassPlot and its specific requirements), there are also various [regional grassland databases](#) whose criteria are less restrictive and their content thus more comprehensive. Many of these regional grassland databases have been established and are run with major support from EDGG. Nearly all of them are also contributing their data to the European Vegetation Archive (EVA) and the global vegetation-plot database “sPlot”.

If you have data that fit both the criteria of GrassPlot and of a regional grassland database (or a comprehensive national vegetation database of your country), we recommend contributing the data to both in order to allow maximum benefit for science and for yourselves. The regional grassland databases normally allow plots of areas from (0.25-) 1-400 (-1000) m² and require a cover or cover-abundance estimate. They cannot handle very small and very big plots, nested-plot series and plots with presence-absence data only (which are all accepted by GrassPlot). On the other hand, the regional grassland databases do not have so strict requirements that only certain plot sizes are accepted nor that plots must have

been delimited in the field very precisely (with pins in the corners and a surrounding tape).

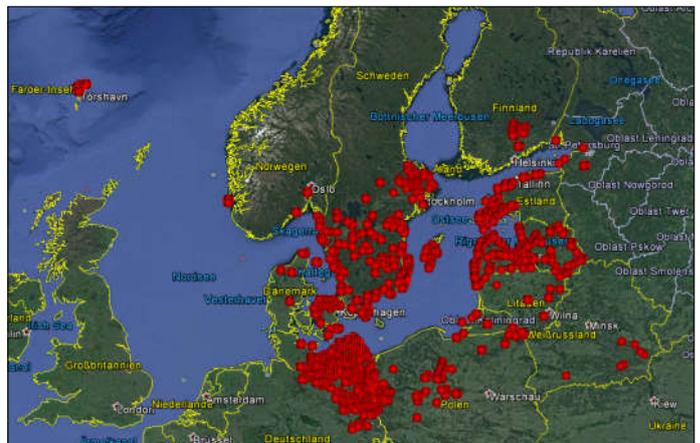
The following regional grassland databases have been launched in the context of EDGG. These collaborative databases aim at **filling major data gaps for continental and global analyses in the context of EVA and sPlot by providing grassland data from otherwise largely underrepresented regions**. Most of them have Bylaws that ensure a transparent and fair participation of data contributors in the benefits from their data (including options for co-authorship and to propose papers themselves). **If you wish to join one of these databases, please directly contact the respective Custodian or Deputy Custodian** (and let them know if part of your data is also in GrassPlot).

NBGVD – Nordic-Baltic Grassland Vegetation Database

GIVD: <http://www.givd.info/ID/EU-00-002>

Geographic coverage: Denmark, Faroer Islands, Iceland, Norway, Sweden, Finland, Svalbard and Jan Mayen, NW Russia, Belarus, Estonia, Latvia*, Lithuania*, N Poland*, NE Germany* (* = new data from these countries are meanwhile collected by specialised national databases).

Syntaxonomic coverage: *Festuco-Brometea*, *Koelerio-Coryneporetea* (including *Sedo-Scleranthetea*), *Molinio-Arrhenatheretea*, *Juncetea maritimi* (including *Saginetetea maritimae*), *Juncetea trifidi*, *Carici-Kobresietea*, *Calluno-Ulicetea* (including *Nardetea strictae*), *Loiseleurio-Vaccinetea*, *Salicetea herbaceae*, *Scheuchzerio-Caricetea fuscae*, *Trifolio-Geranietea sanguinei* (including *Melampyro-Holcetea*), *Mulgedio-Aconitetea* (smaller amounts from other classes are also accepted).



Custodian: Jürgen Dengler (Bayreuth, DE; juergen.dengler@uni-bayreuth.de)

Deputy Custodian: Łukasz Kozub (Warsaw, PL; kozub.lukasz@gmail.com)

Bylaws:

<https://www.researchgate.net/publication/312332996>

Webpage: http://www.bayceer.uni-bayreuth.de/eoinformatics/en/forschung/gru/html.php?id_obj=139255

Consortium members: 25

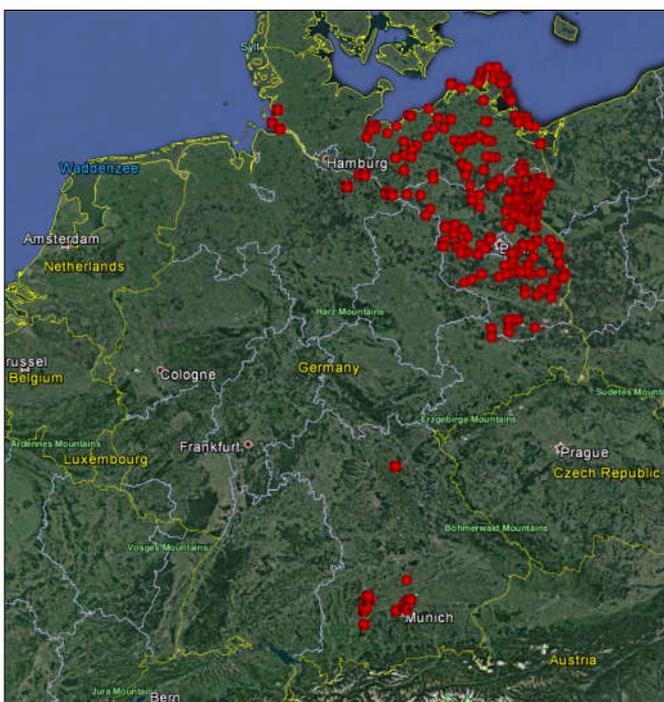
Content: 9,391 plots (as of 21 March 2017)

GrassVeg.DE – German Grassland Vegetation Database

GIVD: <http://www.givd.info/ID/EU-DE-020>

Geographic coverage: Germany

Syntaxonomic coverage: Terrestrial herbaceous vegetation, i.e. all vegetation types EXCEPT forests, shrublands, aquatic and segetal vegetation. This includes all types of grasslands, tall-herb communities, ruderal communities, mires and swamps, heathlands and alpine communities (smaller amounts from other classes are also accepted).



Custodian: Jürgen Dengler (Bayreuth, DE; juergen.dengler@uni-bayreuth.de)

Deputy Custodian: Thomas Becker (Trier; DE; beckerth@uni-trier.de)

Bylaws:

<https://www.researchgate.net/publication/312191873>

Webpage: http://www.bayceer.uni-bayreuth.de/eoinformatics/en/forschung/gru/html.php?id_obj=139259

Consortium members: 7

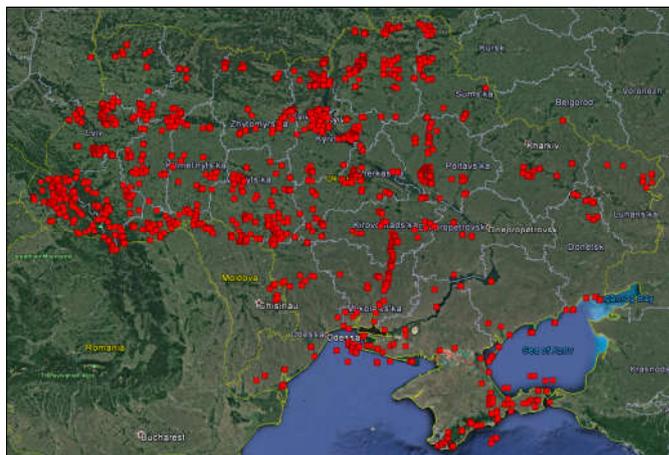
Content: 2,295 plots – very fast growing (as of 10 April 2017)

UGD – Ukrainian Grassland Database

GIVD: <http://www.givd.info/ID/EU-UA-001>

Geographic coverage: Ukraine

Syntaxonomic coverage: *Molinio-Arrhenatheretea*, *Festuco-Brometea* (including *Helianthemo-Thymetea*), *Koelerio-Corynephoretea* s.l., *Calluno-Ulicetea* (including *Nardetea*



strictae), *Phragmito-Magnocaricetea*, *Scheuchzerio-Caricetea fuscae*, *Festuco-Puccinellietea*, *Ammophiletea*, *Cakiletea maritima*, *Trifolio-Geranietea sanguinei*.

Custodian: Anna Kuzemko (Uman', UA; anyameadow.ak@gmail.com)

Deputy Custodian: Yulia Vashenyak (Khmelnysky, UA, vashenyak@mail.ru)

Bylaws: to be published soon...

Webpage: http://www.bayceer.uni-bayreuth.de/eoinformatics/en/forschung/gru/html.php?id_obj=140377

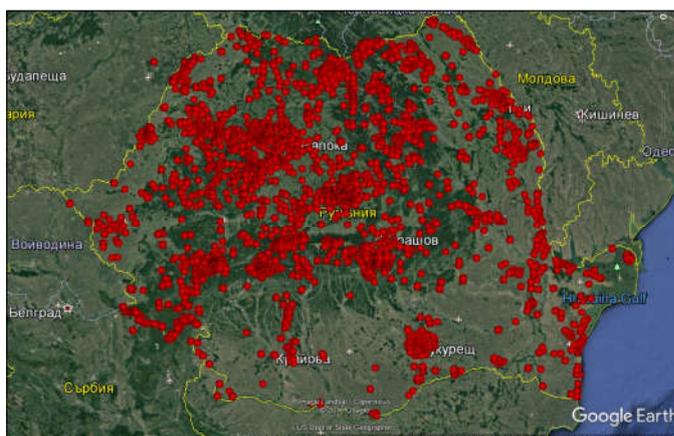
Consortium members: 17

Content: 9,568 plots (as of 20 March 2017)

RGD – Romanian Grassland Database

GIVD: <http://www.givd.info/ID/EU-RO-008>

Geographic coverage: Romania



Syntaxonomic coverage: All vegetation types except forests and shrublands.

Custodian: Estzer Ruprecht (Cluj-Napoca, RO; eszter.ruprecht@ubbcluj.ro)

Deputy Custodian & data manager: Kiril Vassilev (Sofia, BG; kiril5914@abv.bg)

Bylaws: [http://www.bayceer.uni-bayreuth.de/ecoinformatics/en/top/138914/14/140227/Rule s Romanian Grassland Database approved.pdf](http://www.bayceer.uni-bayreuth.de/ecoinformatics/en/top/138914/14/140227/Rule%20Romanian%20Grassland%20Database%20approved.pdf)

Webpage: http://www.bayceer.uni-bayreuth.de/ecoinformatics/en/forschung/gru/html.php?id_obj=140287

Consortium members: 43

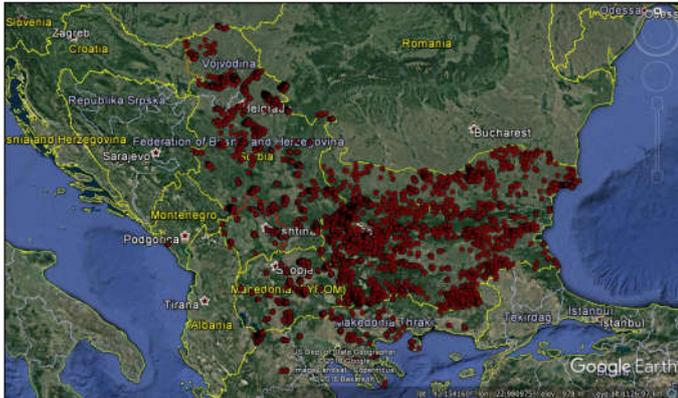
Content: 19,700 plots (as of 30 March 2017)

BDGD – Balkan Dry Grassland Database

GIVD: <http://www.givd.info/ID/EU-00-013>

Geographic coverage: Bulgaria, Serbia, Croatia, Slovenia, Bosnia and Hercegovina, Kosovo, Montenegro, Macedonia, Albania, Greece.

Syntaxonomic coverage: *Festuco-Brometea*, *Helichryso-Crucianelletea*, *Helianthemetea guttati*, *Koelerio-Coryneporetea* s.l., *Lygeo-Stipetea*, *Poetea bulbosae*, *Stipo-Agrostietea*, *Stipo-Trachynietea*, *Daphno-Festucetea*, *Molinio-Arrhenatheretea*, *Elyno-Seslerietea*, *Trifolio-Geranietea sanguinei*.



Custodian: Kiril Vassilev (Sofia, BG; kiril5914@abv.bg)

Deputy Custodian: not elected yet

Bylaws: to be published soon...

Webpage: http://www.bayceer.uni-bayreuth.de/ecoinformatics/en/forschung/gru/html.php?id_obj=140290

Consortium members: 31

Content: 8,576 plots (as of 30 March 2017)

TGD – Turkish Grassland Database

Also for Turkey a collaborative EDGG-affiliated database of non-forest vegetation types is in preparation. Details will be announced in one of the next Bulletins. People interested in joining with their data can contact the Custodian Didem Ambarli (didem.ambarli@gmail.com).

For countries not covered before...

For those countries that do not have a specialised grassland database associated with the EDGG, there is usually a comprehensive national vegetation database available for all vegetation types. You can find out the databases from these countries that might be willing to accept your data at one of the following webpages:

<http://www.givd.info/givd/faces/databases.xhtml>

<http://euroveg.org/eva-database-participating-databases>

Monika Janišová, Banská Bystrica, Slovak Republik

(monika.janisova@savba.sk),

Idoia Biurrun, Bilbao, Spain

(idoia.biurrun@ehu.es)

Jürgen Dengler, Bayreuth, Germany

(juergen.dengler@uni-bayreuth.de),

Kiril Vassilev, Sofia Bulgaria

(kiril5914@abv.bg) &

Anna Kuzemko, Uman, Ukraine

(anyameadow.ak@gmail.com)