European Vegetation Archive

Data Request Form

To obtain data from the European Vegetation Archive (EVA), please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data meeting your needs are available. If they are, please fill in the form below and submit it to Ilona or another member of the EVA Coordinating Board.

- Applicant's name:

Matteo Marcantonio

- Applicant's institutional address:

Evolutionary Ecology and Genetics Group Biodiversity Research Centre Earth and Life Institute University of Louvain (UCLouvain) Carnoy building, office b110 Belgium

- Applicant's e-mail:

matteo.marcantonio@uclouvain.be

- Project title:

Survival of the smartest: is learning a key for rapid adaptation to the reduction and fragmentation of natural habitats ?

- Brief description of the aims and methods of the study:

The project focusses on how plasticity in learning may affect butterflies capacity to adapt to rapid changing environments. The project makes use of a comparative approach, by sampling and testing butterfly populations from both homogeneous and fragmented forests in Belgium. The species of butterflies and their host plants (plants on which females lay eggs and larvae develop) which we will target are: ***Limenitis camilla****: Lonicera periclymenum, L. xylosteum* ***Gonepteryx rhamni:*** *Frangula rhamni, Rhamnus cathartica.* ***Leptidea sinapis****: Lotus pedunculatus, Lotus corniculatus, Lathyrus pratensis, Medicago falcata* ***Anthocharis cardamines****: Cardamine pratensis, Alliaria petiolata, Cardaminopsis arenosa , Arabis hirsuta, Arabis glabra, Arabis pauciflora, Lunaria annua, Barbarea vulgaris, Lepidium campestre, Rorippa sylvestris, Biscutella laevigata, Cardamine hirsuta*

***Lycaena tityrus**: Rumex acetosella, Rumex acetosa, Rumex scutatus, Rumex hydrolapathum, Rumex obtusifolius*
***Argynnis paphia**: Viola riviniana, V. reichenbachiana, V. canina, V. hirta, V. palustris, V. tricolor*
***Melitaea athalia**: Plantago lanceolata.*
***Aphantopus hyperanthus:** Dactylis glomerata, Poa annua, Milium spp, Holcus spp*

Accurate vegetation data on host plant presence and abundance (i.e. from EVA dataset) is going to be important to help explaining why populations originating from fragmented and homogeneuos habitats have different and specific learning syndromes. For example, we hypothesise that butterflies originating from habitats where host plants are mostly aggregated in stable spatial clusters should invest less energy in learning than butterflies from habitats where host plants are rare and sparse over large areas.

- Will someone else be involved in data editing or analysis in addition to the applicant?

Caroline Nieberding (PI of the project). Confidentiality in data use will be guaranteed.

- Estimated time of delivery of results (e.g., manuscript submission):

We're planning several manuscripts (we've aready collected some behvioural data); the first manuscript will be submitted not later than end of autumn 2022.

- Geographic area needed (e.g., countries or range of geographic coordinates):

Belgium and possibly the area in proximity of its boundaries. An optimal bounding box would be: W:2.5, S:49.4, E:6.6, N:51.6 (WGS84, EPSG:4326).

- Do you need plots to be georeferenced? If so, what is the minimum accuracy of plot location (in metres or kilometres) needed for your project?

Yes, spatial location is important for the project. Anything with spatial uncertainty <=1km will fit the aim of the project.

- Vegetation types needed (syntaxa):

Date of survey, oresence, abundance and spatial location (coordinates) of: *Lonicera periclymenum, L. Xylosteum*, *Frangula rhamni, Rhamnus cathartica, Lotus pedunculatus, Lotus corniculatus, Lathyrus pratensis, Medicago falcata, Cardamine pratensis, Alliaria petiolata, Cardaminopsis arenosa , Arabis hirsuta, Arabis glabra, Arabis pauciflora, Lunaria annua, Barbarea vulgaris, Lepidium campestre, Rorippa sylvestris, Biscutella laevigata, Cardamine hirsuta, Rumex acetosella, Rumex acetosa, Rumex scutatus, Rumex hydrolapathum, Rumex obtusifolius, Viola riviniana, V. reichenbachiana, Viola canina,*

Viola hirta, Viola palustris, Viola tricolor, Plantago lanceolata, Dactylis glomerata, Poa annua, Milium spp, Holcus spp.

- Other data selection criteria:

No

- Envisaged publications:

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- Data deposition. Some journals require data used for the analysis to be stored in a public repository to ensure the repeatability of the analysis. According to EVA Rules, you are not allowed to store the original vegetation-plot data obtained from EVA. However, if you plan to publish in such a journal, you may deposit a reduced EVA-derived dataset that (1) would make it possible to repeat the analysis published in the paper and (2) does not contain any information not used in the analysis. For example, such a dataset can contain only a subset of species (e.g., only angiosperms or only neophytes), or replace species names with codes, or replace species cover values with presences/absences, or remove all the header data, or replace the exact plot coordinates by coarse grid-cell coordinates etc. If you plan to deposit reduced information from vegetation plots, please describe here what might be deposited. If the project developed so that you needed to deposit more information than specified here, you would need to ask specific permission from the Custodians of the EVA databases used in your analysis before the dataset is deposited.

No data from EVA will be deposited in public datasets.

- Plant trait data from the TRY consortium. If you plan to combine your analysis of vegetation-plot data with plant trait data, you can also request for a dataset of 18 gap-filled traits for a large number of plant taxa prepared by the TRY consortium. These traits include Leaf area, Specific leaf area, Leaf fresh mass, Leaf dry matter content, Leaf C, Leaf N, Leaf P, Leaf N per area, Leaf N:P ratio, Leaf delta15N, Seed mass, Seed length, Seed number per reproductive unit, Dispersal unit length, Plant height, Stem specific density, Stem conduit density, and Conduit element length. This dataset can be provided to you from the EVA manager together with the vegetation-plot data. If you use this dataset, you must inform about your project the TRY data contributors who might be potentially interested and invite them as potential co-authors, assuming they will make an intellectual contribution to your paper. The list of the TRY data contributors will be sent to you together with the gap-filled trait dataset.

NO

- Specification of the co-authorship arrangements in publications based on the requested data. Note that the EVA Rules recommend that co-authorship is offered to a representative of each database providing data that are particularly important for the project (e.g., a relatively large proportion of the final dataset used in the analyses or data from unique vegetation types or under-represented geographic areas). This database representative should be an expert in the topic of the project (not necessarily the custodian or deputy custodian), and this person should contribute to the project more than just by providing the existing data, e.g. by intellectual contribution to the concept of the paper, preparation of new data, or helping with data analysis, interpretation of the results or writing parts of the paper (see the IAVS Code of Professional Ethics: http://iavs.org/Governance/Code-of-Professional-Ethics.aspx). The project leader should enable active participation by regularly informing potential co-authors about the progress of the project from its early stage. The project leader should also make final co-authorship arrangements based on the real input of the individual contributors.

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We will invite representative of EVA database based on the contribution that each dataset will provide to the success of the project. Here is the context in which the data will be used: host plant distributions will be important for our project in the sense that these data allow us to predict the selective pressure on behavioural syndromes of the butterfly species, however the experimental data, and consequently the manuscripts, we will be focussed on behavioural ecology of butterflies.

- Eligibility of the applicant to receive EVA data. Specify to which EVA database the applicant has contributed; if the applicant is not the custodian or deputy custodian of an EVA database, give a name of a custodian or deputy custodian who supports this data request.

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- I agree with the terms of EVA Data Property and Governance Rules as approved on 26 May 2012 (http://euroveg.org/download/eva-rules.pdf).
- In any result obtained based on this data, I will cite the EVA report paper (Chytrý et al. 2016; https://doi.org/10.1111/avsc.12191). In addition, I will cite individual source databases used in my project (if possible, in the list of References; if not possible, at least as a list of databases in the electronic supplementary material).
- If I ask for the plant trait data from TRY, I agree to invite to my project the TRY data contributors following the list received from the EVA database manager.

Matteo Marcantonio

Louvain-La-Nueve, 8 December 2021.