European Vegetation Archive

Data Request Form

To obtain data from the European Vegetation Archive (EVA), including the ReSurveyEurope Database, please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data that meet 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 (or ReSurveyEurope Board if you ask for data from the ReSurveyEurope Database).

- Applicant's name:
  Beñat Orbea
- Applicant's institutional address:
  Institut Botànic de Barcelona (IBB) CSIC-CMCNB
- Applicant's e-mail:
  benat.orbea@ibb.csic.es
- Project title:
  Revisiting Darwin Naturalization Conundrum in the Iberian Peninsula
- Are you asking for core EVA data (non-repeated vegetation surveys) or for ReSurveyEurope data (repeated vegetation surveys)?
  Core EVA data
- Brief description of the aims and methods of the study:

This EVA project is linked to the Botanical Institute of Barcelona's project "Deciphering the Key to the Success of Alien Flora in the Iberian Peninsula." Two opposing hypotheses have been proposed to explain the naturalization of alien species, framed within Darwin's Naturalization Conundrum. The first hypothesis states that phylogenetically distant alien species are more likely to naturalize because they occupy different niches (the naturalization hypothesis). Alternatively, the second hypothesis suggests that phylogenetically close alien species are more likely to naturalize because they are preadapted to local conditions (the preadaptation hypothesis). The relative support for these hypotheses appears to vary across different geographic regions and spatial scales.

In this study, we will specifically test whether one of these two hypotheses predominates across the entire study area and within each bioclimatic zone defined by Rivas-Martínez et al. (2017); as well as across EUNIS level 1 or 2 habitat categories. Alien naturalized species will be defined according to the recently published checklist (Soto et al., 2025).

First, we will extract the entire regional species pool from the plots in EVA data. Then, we will construct a phylogeny by pruning published phylogenetic trees and grafting missing taxa at the most accurate possible taxonomic level based on their accepted classification. For each vegetation plot, two phylogenetic distance metrics will be calculated: MDNS (Mean Distance to Native Species) and DNNS (Distance to the Nearest Native Species). Subsequently, null models will be generated by creating 1000 random communities for each plot, in which native community

composition remains constant while alien species are randomly assigned from the entire regional pool. The observed phylogenetic distance values of each vegetation plot will be compared with those obtained from the null communities to calculate standardized effect sizes (SES) and assess their statistical significance. These SES values will be analyzed across the bioclimatic zones and the EUNIS habitat categories mentioned above to determine which hypothesis is more prevalent in each category, or whether a random distribution is occurring.

Rivas-Martínez, S., Penas, Á., del Río, S., Díaz González, T.E., Rivas-Sáenz, S. (2017). Bioclimatology of the Iberian Peninsula and the Balearic Islands. In: Loidi, J. (eds) The Vegetation of the Iberian Peninsula. Plant and Vegetation, vol 12. Springer, Cham. https://doi.org/10.1007/978-3-319-54784-8_2

Soto, I., Oficialdegui, F. J., Bedmar, S., Capinha, C., Sousa, R., García-Berthou, E., ... & Briski, E. (2025). Over 1200 Non-Native Species Are Established in the Iberian Peninsula. Diversity and Distributions, 31(8), e70071. https://doi.org/10.1111/ddi.70071

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

  Members of IKERLAND group in the University of the Basque Country (UPV/EHU): Idoia Biurrun, Juan Antonio Campos.

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

  2026-2027

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

  Iberian Peninsula: Portugal, Spain, Gibraltar and Andorra, except islands.

- 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 (1 km)

- Vegetation types needed (syntaxa):

  All types

- Other data selection criteria:

  From 1970 onward

- Envisaged publications:

  One article in an international scientific journal

- 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.

If data deposition is requested by the journal, only the minimum dataset needed for the computational reproduction of the analyses will be deposited.

- 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 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 by 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: https://www.iavs.org/page/governance_code-of-proffesional-ethics). 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.

  Preliminary results of individual studies will be shared with data contributors who register for this project via the EVA online form and whose data are included in each study. Co-authorship will be offered to a representative of each database that contributed more than 1% of the plots used in a given study—or fewer, if those plots are particularly important for the study and the representative has expressed interest in the project through the EVA online form. In accordance with EVA guidelines, co-authors are expected to provide intellectual contributions to the article.

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

  Juan Antonio Campos is the custodian of SIVIM – Deciduous forests (EU-00–023)

- 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).

- If I ask for ReSurveyEurope data, I agree with the terms of ReSurveyEurope Data Property and Governance Rules as approved on 6 April 2022 (http://euroveg.org/download/resurveyeurope-rules.pdf).
- In any result obtained based on EVA core data (non-repeated vegetation surveys), I will cite the EVA report article (Chytrý et al. 2016; https://doi.org/10.1111/avsc.12191). In any result obtained based on the ReSurveyEurope data (repeated vegetation surveys), I will cite the ReSurveyEurope report article as soon as it is published. 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.

Barcelona 08/01/2026

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