

Analysing historic vegetation changes in Europe

3-Years PhD-position

The Division of BioInvasions, Global Change & Macroecology at the University Vienna (<http://bioinvasions.univie.ac.at>) is offering a PHD-position on analysing historic changes in vegetation composition and richness in Europe.

Context

Plot-based **vegetation samples document plant species diversity and community composition at a given location at a given time**. Such data allow for a wide variety of research questions to be addressed, and accordingly. The mobilization of vegetation-plot data, and their compilation in large repositories such as the European Vegetation Archive (EVA, <http://euroveg.org/eva-database>) and the global vegetation database sPlot (<https://www.idiv.de/de/splot.html>) have substantially expanded the availability of these types of data. Recently, **ReSurveyEurope** (<https://euroveg.org/resurvey/>) – a **new data source of resurveyed vegetation plots in Europe**, has been established. Version 1.0 of ReSurveyEurope contains 283,135 observations (i.e. individual surveys of each plot) from 79,190 plots sampled in 449 independent resurveys. ReSurveyEurope is a powerful new resource to address a **wide range of research questions on fine-scale changes in European vegetation**.

In addition, a **bilateral Austrian-Czech project (GRACE)** led by Adam Clark, with project partners Petr Keil, Hana Skokanová, and University Vienna has recently been funded. The GRACE project studies **how historic changes in landscape composition and structure influenced grassland plant communities across the former Austro-Hungarian Empire**, with a particular focus on the present-day **border region between Austria and the Czech Republic**. ReSurveyEurope and GRACE interact closely, and the **PhD position is intended to use opportunities created by these two initiatives / projects** to analyse historic vegetation changes. The work of the PhD-candidate will mostly consist of preparing and analysing existing re-surveyed plot data. In addition, it will involve some sampling of additional vegetation plot data for GRACE. The PhD-candidate will also closely **collaborate** with a recently funded **Biodiversa+-project (MOTIVATE)** that is based on data from ReSurveyEurope.

Objectives

- Analyse historic changes in vegetation composition and diversity in Europe by using plot data from ReSurveyEurope
- Analyse vegetation changes in Central Europe within the GRACE project

Salary

The salary of the position will be according to the Austrian Science Foundation (FWF) PhD-salary (<https://www.fwf.ac.at/en/funding/steps-to-your-fwf-project/further-information/personnel-costs>). The PhD-candidate will become part of the Vienna Doctoral School of Ecology and Evolution (<https://vds-ecology-evolution.univie.ac.at/>).

Supervision

- Prof. Dr. Franz Essl, Division of BioInvasions, Global Change & Macroecology; University of Vienna (main supervisor)
- Prof. Dr. Stefan Dullinger & Dr. Dietmar Moser, Division of Conservation and Biodiversity Dynamics; University of Vienna (co-supervisor)
- Dr. Michael Glaser & Dr. Bernd Lenzner, Division of BioInvasions, Global Change & Macroecology; University of Vienna (co-supervisors)

Project partners and collaborators

- Prof. Adam Clark, University of Graz, Graz
- Dr. Petr Keil, Czech University of Life Sciences, Prague
- Dr. Hana Skokanová, Silva Tarouca Research Institute for Landscape and Horticulture, Brno
- Prof. Milan Chytrý, Masaryk-University, Brno
- Prof. Helge Bruehlheide, University of Halle, Halle

Your profile

- Master in ecology, botany, environmental sciences or a related field
- Interest in studying ecological dynamics and biodiversity changes
- Experience and interest in analyzing complex ecological data
- Good knowledge of Central European Flora and vegetation is advantageous
- Good organizational, writing and communication skills
- Fluency in English (written and spoken); knowledge of German is advantageous, but not required

Starting date

The anticipated starting date is May or June 2024.

Application documents

- One-page letter describing your motivation
- CV including contact information of two references

Please, send all the information in a **single PDF** with the subject "HistoricVegetationChange-PhD-Application-[your last name]" to Franz Essl (franz.essl@univie.ac.at). I am also available for further inquiries under the same address.

Application deadline is Monday, 18. March 2024. Interviews will be held end of March to early April.