

To whom it may concern,

My name is Will Glenny. I will be starting an Alexander von Humboldt postdoctoral research fellowship in Dr. Tiffany Knight's group at iDiv. Our goal is to investigate how the time-since-restoration and restoration practices influence different components of plant community diversity. We are seeking data and collaborations within the eLTER network to address these knowledge gaps, which will result in a manuscript that informs restoration techniques for European grasslands.

Describing the taxonomic, functional, and phylogenetic response of plant communities to different restoration methods is important for informing management actions that can recover functioning ecosystems. Active restoration (e.g., reseeding areas using plant mixes for policy subsidies) may remove dispersal barriers for plants, resulting in local communities that are more diverse than passively restored areas (e.g., abandonment to transition from intensive to extensive uses). We predict that the taxonomic, functional, and phylogenetic diversity of plant communities will initially be higher within actively restored areas, but through time, equal the diversity of passively restored areas. We also anticipate that plant communities in passively restored areas will have a higher abundance of species with traits that improve dispersal and establishment within disturbed areas. Restoration of biotic communities may be required to prioritize all measures of diversity for long-term success.

To answer these research questions, we are seeking data within the eLTER network related to:

- a.) Plant community composition at a site (presence and abundance of plant species);
- b.) Time since restoration (in years);
- c.) Restoration practices used at the site (e.g., reseeding vs. abandonment). If reseeding, knowledge of the plant species used within the seed mix is ideal.

We are particularly interested in locations within the eLTER that collect data on the date restoration actions were applied, method of restoration, and plant community composition. As an example, the ZA Plaine & Val de Sevre eLTER location in France monitors 60 grassland sites annually that are restored under different management regimes (Bretagnolle et al. 2018). We will define sites at eLTER locations as passively or actively restored and assess changes in the diversity of plant communities since the time restoration actions were applied (in years). Furthermore, we will assign functional traits to plant species at each site using the TRY database (Kattge et al. 2020) and estimate phylogenetic diversity by using a published supertree of vascular plants (Zanne et al. 2014).

This research will form the basis for a manuscript and future projects related to insect pollinator restoration. Insect pollinators rely on flowers as food resources, but it remains unclear if current revegetation strategies benefit pollinator communities. Therefore, we aim to understand if plant and pollinator communities have congruent responses to restoration actions within European grasslands.

There will be an opportunity to earn co-authorship for those who contribute data and writing efforts towards the final manuscript.

Thank you for your time and please contact me with any questions.

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