



CESAB
CENTRE FOR THE SYNTHESIS AND ANALYSIS
OF BIODIVERSITY

Post-doctoral fellowship for the FRB-CESAB project BRIDGE

Disentangling landscape and local factors in shaping the taxonomic and functional plant community diversity of roadside corridors, river corridors and cultivated field margins across a European gradient

Location: FRB – CESAB, 5, rue de l'École de Médecine, 34000 MONTPELLIER

Salary: 2518 € gross per month (not negotiable)

Contract: 18 months, full time

Closing date: 31 January 2022

Starting date: March 2022

HOST STRUCTURE

About FRB

The **Foundation for research on biodiversity (FRB)** was created in 2008. It gathers public research institutions, environmental NGOs, land and genetic resources managers and the private sector. It provides a forum where science meets society in order to address the current challenges related to biodiversity research.

About CESAB

The **Centre for Synthesis and Analysis of Biodiversity (CESAB)** is the FRB's main programme and a leading research organization in Europe, with an international reputation. Launched in 2008 after the "Grenelle de l'Environnement" by the Ministry for research and for ecology, it was created by eight public research institutions (BRGM, CIRAD, CNRS, IFREMER, INRA, IRD, IRSTEA and MNHN), joined in 2014 by LVMH and in 2017 by the University of Montpellier.

Its aim is to implement the innovative work of synthesis and analysis of existing data in the field of biodiversity. The main objectives of CESAB are advancing knowledge, developing culture and collaboration, and facilitating links between scientific disciplines and with the stakeholders. The CESAB welcomes every year a large number of researchers from all continents.

For more information about CESAB: <https://www.fondationbiodiversite.fr/en/about-the-foundation/le-cesab/>

YOUR ROLE

The **BRIDGE** project (<https://www.fondationbiodiversite.fr/en/the-frb-in-action/programs-and-projects/le-cesab/bridge/>) is an international project co-funded by the French Foundation for Biodiversity Research and the ITTECOP (Land Transport Infrastructures, Ecosystems and Landscapes) Program (<https://ittecop.fr/en/>). The main objective of BRIDGE is to understand how landscape interactions between roadside corridors, river corridors and cultivated field margins shape the taxonomic and functional plant community diversity across a European gradient. A specific objective of the project will be to disentangle between biodiversity landscape level controls (landscape architecture and connectivity) and local controls (physical disturbance, substrate nutrient content...). At the landscape scale, we predict that the geographic proximity (vicinity, intersection) among the three studied habitats enhances both taxonomic (species) and functional (trait) diversities, as a result of a greater connectivity and dispersal between linear habitats. At the local scale, we predict that the nature and level of physical disturbance and trophic stress are the main drivers of functional redundancy/complementarity and taxonomical similarity among the different habitat types. At an applied level, we will investigate under which ecological conditions and landscape configurations the different linear ecosystems drive particular functional and taxonomic biodiversities that are likely to correspond to optimal situations for the interest of local or regional stakeholders.

The post-doc is expected to:

- ✓ Coordinate the progress of the BRIDGE main tasks among project partners (based in France, UK, Italy, Spain, Canada, and USA)
- ✓ Contribute to the building, standardization and management of a common, homogeneous database from various environmental and floristic datasets provided by different project partners
- ✓ Derive synthetic variables from these datasets, e.g. taxonomic and functional diversity, plant traits and use them in statistical models to test ecological hypotheses.
- ✓ Leading the dissemination of project results including writing scientific papers and communications to international conferences

Working environment: The post-doc will be hosted in Montpellier (France) by the CESAB (see description above). The job holder will be under the supervision of Eric Tabacchi (CNRS, Toulouse) and Guillaume Fried (Anses, Montpellier) and will benefit from the expertise of all project members (8 persons from 6 countries with specialists in botany, land use planning, invasive species and functional ecology) and from the methodological and logistic support of the CESAB. CESAB will also provide a specific budget for a laptop workstation and for 30 days travels to visit the project PIs. The BRIDGE project budget also includes travels and fees associated to scientific dissemination activities.

QUALIFICATIONS

The candidate is expected to have good data management skills in order to produce a homogeneous database from existing international (France, Spain, Italy, United Kingdom) floristic and environmental datasets from ground surveys, remote sensing images and maps. We anticipate the use of various inferential and multivariate statistical techniques for data analyses under R and other statistical softwares. A robust scientific background in Community Ecology, Landscape Ecology and Ecological Modelling is expected. Good botanical knowledge and some familiarity with methods for describing taxonomic and functional diversity including the use of plant traits will be an advantage for the candidate. Ideally, the candidate should have already worked on at least one of the ecosystems studied. A solid track record of publications in refereed journals is also expected.

APPLICATION INSTRUCTIONS

- A cover letter;
- Your curriculum vitae

Applications must be sent no later than 12:00 pm, Central European Time, 31st January 2022 to:
eric.tabacchi@univ-tlse3.fr and guillaume.fried@anses.fr