



CESAB
CENTRE FOR THE SYNTHESIS AND ANALYSIS
OF BIODIVERSITY

Post-doctoral researcher “Dragonflies As Indicators Of Human Impacts On European Lands And Waters” (DRAGON)

Location: FRB – Cesab, 5 rue de l'École de Médecine, 34000 Montpellier.

Duration: 24 months fixed term, full-time.

Salary: 2620 to 2801€ gross per month commensurate with experience.

Starting date: Flexible, between October 2024 and January 2025.

Application closing date: Wednesday, 31st July 2024.

Information about the offer

Host structure

About the Foundation for Research on Biodiversity

The 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 is FRB's main programme and a leading research organisation in Europe, with an international reputation.

Its aim is to implement the innovative work of synthesis and analysis of existing data in the field of biodiversity. Advancing knowledge, developing culture and collaboration, facilitating links between scientific disciplines and with the stakeholders, are the main objectives of CESAB, which 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/>

Main tasks and activities of the post-doctoral researcher

The [Dragon](#) Project

Biodiversity is declining worldwide, providing stark warnings about the perilous state of ecosystems. The ongoing biodiversity crisis urges scientists to provide comprehensive indicators of biodiversity changes and how they link to anthropogenic pressures. The CESAB project DRAGON is a synthesis project that aims to investigate the links between human activities and their impact on biodiversity and to develop tools to design the necessary conservation measures and assess their effectiveness.

The project focuses on odonates (dragonflies and damselflies), a charismatic and important taxonomic group that offers a unique opportunity to study the effects of anthropogenic pressures on terrestrial and aquatic ecosystems. In this project, we will mobilise and use opportunistic and standardised odonate data from across Europe to determine temporal trends in population and species distributions at different spatial scales. These trends will be analysed in the context of various anthropogenic pressures, including climate change, land use change and pollution to identify and better understand the drivers of change and derive new indicators for environmental monitoring.

Through engaging with leading national and international researchers, practitioners and policymakers, the DRAGON consortium will co-develop indicators to support evidence-based decisions, protect habitats at the land-water interface and mitigate the impact of anthropogenic pressures on biodiversity. Supported by a consortium of 11 international researchers, the postdoctoral Scientific Project Manager will be expected to contribute to the various aspects of the and take the lead on topics that best fit their skills/interests.

The post-doctoral researcher is expected to:

- Assemble and harmonise European datasets on odonates and anthropogenic pressures.
- Design analyses of opportunistic and standardised datasets to estimate population and distributional trends at different spatial and temporal scales.
- Analyse population and community changes and how they relate to species' life-history traits.
- Investigate how anthropogenic pressure impacts the status and trends of odonates.
- Work with stakeholders to co-develop a European platform to standardise data and calculate relevant and robust indicators (e.g., vulnerability scores for species or functional groups for different habitat types) to inform applied conservation, monitor and mitigate the impact of anthropogenic pressure on biodiversity.
- Actively participate in the development of grant proposals.
- Lead and coauthor scientific publications in international journals

With the support of Principal Investigators (PIs) and the CESAB team, the postdoctoral researcher will also be expected to organise the scientific activities of DRAGON consortium workshops at CESAB in Montpellier (one-week twice a year, with one being online), facilitate communication within the consortium and actively engage with various stakeholders.

Working environment

The post-doctoral researcher will work at the CESAB office in Montpellier, together with other CESAB synthesis post-docs. The postdoctoral associate will be under the supervision of Colin Fontaine (CNRS-CESCO, France), Reto Schmucki (UK Centre for Ecology & Hydrology) and Martin Jeanmougin (Vigie-Nature, France) and will benefit from the expertise of the wider consortium (academic researchers, conservationists, data scientists, biodiversity monitoring and odonate experts). The postdoctoral associate will be able to engage with other postdocs and consortiums working at the Cesab. The host structure will provide methodological and logistic support, with a specific budget for a laptop workstation and travels to visit project partners and PIs.

Requirements

PhD in ecology, conservation, or a related field, with a strong background in ecological modelling, statistics, spatial, and quantitative analyses. The ideal candidate will be highly motivated and have prior experience working with collaborative scientific teams or consortia.

- **Essential skills:**
 - Strong quantitative skills: data analysis and statistical modelling applied to large datasets.
 - Programming skills (R, Python or Julia) for data processing.
 - Experience with spatial analysis and geo-computing (GIS).
 - Ability to synthesise information and translate ideas and concepts to multiple audiences, verbally and written.
 - Good team player, able to work independently and coordinate with larger interdisciplinary teams.
 - Willingness to engage and collaborate with diverse stakeholders (scientific experts, NGOs, landscape managers, policy makers, etc.).
 - Fluency in English, both written and verbal.

- **Preferred:**
 - Experience working with consortium and collaborative science.
 - Experience working with version control and cloud, or cluster computing.
 - Experience with data management and databases (e.g. PostgreSQL).
 - Competency with Bayesian statistics and hierarchical occupancy modelling.
 - Experience with odonates, freshwater ecology and/or conservation issues.
 - Knowledge of French can be an asset.

Application instructions

Applicants should send 1) a cover letter, 2) a curriculum vitae, and 3) the names and email addresses of three references to colin.fontaine@mnhn.fr and retoschm@ceh.ac.uk

Applications must be submitted no later than Wednesday, July 31, 2024. Interviews are expected to be held in early September, with a starting date between October 2024 and January 2025.