

Three months internship for a Masters student

Title: Characterization of the breeding sites of the European tree frog in the upper Rhine valley

Summary: A monitoring as well as conservation actions for the European tree frog *Hyla arborea* have been implemented in the scope of the INTERREG Ramsar biodiversity project. This project started in 2019 and runs for three years, and we consider working on the ecological characterization of breeding habitats in 2020 to adjust and refine the monitoring protocol and also to formulate recommendations for habitat management. Therefore, the aim of the internship will be to define the ecological parameters important for the choice of breeding sites in the Rhine valley. A survey of breeding sites is available. In the course of the internship, the student will have to go on the field to collect environment covariates that will consequently be included in a model to define which covariates are important for the species.

All this work will be mainly performed in R language, and it is required to be familiar with this coding environment. Also, some covariates will be reckoned within GIS software (QGIS and ArcGIS). Finally, it is recommended to be familiar with reading scientific articles in English. During this internship, the student will be required to develop a methodological and scientific reflexion based on a robust theoretical ground, to gather and process data in France and Germany, to develop and implement statistical methods, to write a report that present the methods, the results and their implications. The student could be initiated to bibliographical management tools (Mendeley) as well to the LaTeX suite for writing the report. Scripts in R used for similar projects are available and could serve as templates for this work.

Required skills:

- Familiar and at ease with coding in R
- Familiar with GIS tools
- Rigorous and scientific spirit, critical mind, autonomy at work
- Good understanding of written English
- Good writing skills

Duration and planning:

Three months internship from March to June 2020. Dates can be modulated according to the constraints of the student.

- 15 March–31 March: State of the art (reading articles, building a bibliographic database), first approach of modelling and GIS tools with the already available data.
- 1st April–15 April: Gathering of data on the field.
- 16 April–31 May: Processing of data, statistical analyses, modelling.
- 1st June–15 June: Writing of the report.

Place of the internship: Office of association BUFO, 8 rue Adèle Riton, 67000 Strasbourg, France.

Supervision: The student will be supervised by Jean-Pierre Vacher, scientific officer.

Miscellaneous:

- It is not required to speak French, but it is required to speak English.
- It is required to have a valid driving licence, as the student will have the possibility to use the company car or his/her own car for field work. All travel costs will be covered.
- The student will receive a wage of 525 euro per month. This figure will be adjusted according to the 2019-2020 scale.

Contact: Please send your application to Mr. the President of the association BUFO through e-mail at the following address: jp.vacher@bufo-alsace.org

There is no deadline for application, it will remain open until we find a suitable candidate.