PhD opportunity at the Universitat de Girona, Spain

Project fun-METANET: Species-**fun**ctional **METANET**works for biodiversity assessment at the regional scale

We are looking for a highly motivated person to do a PhD with us linked to the **fun-METANET** project. The theme focuses on the effect of connectivity and metacommunity dynamics on biodiversity, mainly functional, at the local and regional level. The thesis will include field and experimental work, also including some modelling. Samples of aquatic organisms (microcrustaceans and macroinvertebrates) will be analyzed using a classic taxonomic approach, but also molecular tools, for which training courses in bioinformatics data analysis and the possibility of developing short stays in laboratories of our collaborators are planned to train the PhD student in the different disciplines required in the thesis (from modelling to the interpretation of genetic results).

Requirements:

- Undergrad in Biology, Environmental Sciences or similar.
- Applicants will have to be enrolled or have been admitted to a doctoral program for the 2021/2022 course (although this can be formalized later).
- Good academic record. High or very high English level. Good writing abilities.
- Certain knowledge of R, statistical tools, as well as bioinformatics tools.
- Motivation to learn and to work as a team.
- Driving license

Project summary info:

Investigador principal: Dra. Stéphanie Gascón (Institut d'Ecologia Aquàtica, GRECO, UdG)

Fun-METANET is a project that aims to advance on the study of metacommunities functioning, using a species-functional network approach to better understand, species contribution to the functional diversity of the systems. Within this framework we will usually work with lagoons, mostly Mediterranean, and their aquatic fauna, as model systems.

Thus, the main objective of the project is to elaborate a general framework integrating species-functional networks under the metacommunity theory to disentangle the link between biodiversity and ecosystem functioning. To do this, we will analyze the changes observed in the functional network of species when increasing the scale, both temporal and spatial, and we will determine the importance of spatial connectivity on the structure of the metanetwork.

The outputs of the project will be very valuable for managers in the field of biodiversity conservation, since it will allow: 1) to identify species that show low functional redundancy (interesting to preserve the integrity of the ecosystem, since they present a unique functionality), and 2) understand the role of each locality in configuring the spatial connectivity of the metanetwork, which could help stakeholders to in decision-making to prioritize essential sites to preserve metacommunity dynamics and improve management decisions such as the design of monitoring plans.

For more information visit our website: https://stephigascon.wixsite.com/fun-metanet

Work team:

The person selected will join a dynamic group (https://www.udg.edu/es/grupsrecerca/greco) and research institute (https://iea.udg.edu/) that develops a good number of research projects of varied topics. The group has a firm commitment to training with its students to ensure the maximum benefit of learning, including participation in courses and congresses, stays in other laboratories, seminars and other training strategies. In addition, we maintain close contact with national and international researchers in the fields of lagoon ecology, metacommunities, network connectivity and with large experience with mesocosm experiments. We are fully committed to the "10 simple rules towards healthier research labs" (http://tiny.cc/umhoez)

Contact us ASAP if you are interested!
Estimated deadline for call opening October 2021!!!!!

Contact person: Dra. Stéphanie Gascón (+34 972 418 466, email: stephanie.gascon@udg.edu)

• **Subject:** Beca FPI de la **Convocatoria 2021**

• **Research team website:** https://limnolam.org/