

## Post-doctoral position at Muséum National d'Histoire Naturelle, Paris France.

The Institut de Systématique Evolution et Biodiversité seeks applicants for a **full-time Post-doctoral position in macroecology** focussing on land plants functional diversity in islands.

Islands have always intrigued biologists, due to their remarkable biodiversity. They are considered natural laboratories of evolutionary specialization and adaptation, because life in isolation has allowed evolution to take its own course, giving rise to many innovations and leading to peculiar faunas and floras (Losos and Ricklefs 2009).

Although much of island biology has been well explored, we still lack documented patterns at large scale in order to understand the main drivers shaping island biodiversity. Factors such as distance from a source of colonizers (continents or other islands), size and age are recognized to be important determinants of species richness in islands. But, is it true at large scale and for every group of organisms? What does it mean in terms of other biodiversity features such as Phylogenetic Diversity (PD) or Trait Diversity (TD)?

Our aim is to answer these questions using our dataset of curated occurrences and trait diversity for land plants, representing a large proportion of plant diversity on earth. However, several operational problems appear when dealing with such a large data set. The main contribution of this project is dealing with this data to provide an overall understanding of phylogenetic and trait diversification in islands. In addition to that, this will also contribute to finding solutions and designing scripts that can further be applied to any kind of study of this type.

The specific objectives will be:

i) Assessment of the spatial correlation of phylogenetic diversity with trait diversity. The aim will be to detect if there is an overall match, and to investigate the factors that could explain those matches and mismatches.

ii) Verification of the relationship between island endemism, phylogenetic and trait diversity. Are there common trends shared by species endemic of island when compared to species also occurring in continental areas (here after called widespread for convenience)? The idea is to test whether island endemics tend to have more original traits than widespread species, and how this is associated with phylogenetic diversity. Are original traits associated with particular branches? Are there tendencies for appearance of original traits in particular places of the phylogenetic tree? Did they appear by convergence?

A second step in both studies will be the analysis of diversification drivers in islands.

We are looking for a passionate scientist with solid background in **macroecology** and demonstrated skills in **R** and **Python** languages, desirably applied to manipulating and analyzing large amounts of data replaced in a spatial perspective, or very large phylogenies. There is **no language** prerequisite. This offer is for a **24 months full-time position**, funded by the Labex BCDiv (Diversités Biologiques et Culturelles). Salary will be commensurate with the experience of the candidate. For a first job after PhD, gross salary is 30000 Euros/Year (2500 Euros Month). Funds are already secured for the whole duration of the contract and the successful candidate shall begin on January 1<sup>st</sup> 2017.

Candidates' Ph.D. should have been defended and awarded at November 30<sup>th</sup> 2016. Candidates will be selected for an **oral presentation** at the very beginning of December. All charges related to the trip to the oral examination will be taken in charge by our project. We can also use Skype or other videoconference media for this audition.

A **full CV and a cover letter, with two recommendation letters** from previous employers or supervisors, should be sent by e-mail to Thomas Haevermans [haever@mnhn.fr](mailto:haever@mnhn.fr) Roseli Pellens [pellens@mnhn.fr](mailto:pellens@mnhn.fr) and Maud Mouchet [maud.mouchet@mnhn.fr](mailto:maud.mouchet@mnhn.fr). The **deadline** is November 5<sup>th</sup> 2016, midnight Paris (FR) time.