



24 month postdoc on " "Multidimensional conservation of global rainforest diversity: Extinction risk and loss of evolutionary history within the pantropical family Annonaceae" "

Research Area and Project Description: The ERC Consolidator project "GLOBAL" aims to unravel the evolutionary history and diversification of tropical rain forests (TRF) at a global scale. The project focuses on the pantropical Annonaceae plant family, an important component of TRF worldwide with around 2500 species. During the project we aim to sequence all (ca. 2500, one individual per species) species of the family from silicagel dried and herbarium specimens. For each species around 300 Annonaceae-specific exons and the angiosperm universal exons (353) will be sequenced. This dataset will provide one of the first robust and near-complete phylogenies of any major pantropical plant families to date. Additional data will be compiled documenting the family's morphological, geographical and chemical diversity. These datasets will be used to test numerous TRF evolutionary hypotheses and estimate the impact of extinction on Annonaceae diversity at a global scale.

Within this project we seek a highly motivated postdoctoral researcher to lead multidimensional analyses of large scale datasets surrounding Annonaceae diversity. The datasets range from a near complete species level dated phylogeny of the whole Annonaceae family (ca. 2300 tips) used to estimate phylogenetic diversity; ~30 morphological trait database used to infer functional diversity; Near Infra Red (NIRs) spectra used to infer chemical diversity; and spatial distribution of all Annonaceae species used to infer spatial diversity. All datasets cover the full geographic distribution of this pantropical family. Most of the data is already available (generated within different post doc or PhD ongoing projects). The postdoc is expected to contribute ideas and concepts to the project and lead at least two high-quality papers in this research area, contribute to the project's public outreach, as well as collaborate with other team members, including students (from across the GLOBAL network) and sharing skills (data analysis training etc.). The post doc will become part of the Macroevolution in Montpellier group ("MiM", created by Fabien Condamine and Thomas Couvreur), and will be expected to help animate some of the monthly meetings.

Qualifications and Specific Competences: Applicants must have a PhD degree in evolution, spatial analyses of diversity, phylogenetics, comparative methods, functional diversity or equivalent. Proven experience with phylogenetic analyses (i.e. be able to estimate EDGE2 statistics), functional diversity estimates and/or spatial analysis of biodiversity data is requested; experience in handling large and multidisciplinary datasets (> 200 species/OTUs) is a strong advantage. Experience with modeling extinction risk in the future is an advantage. Strong skills in bioinformatics and being familiar with Linux/cluster management and R and/or Python languages are expected. The successful candidate is expected to have excellent collaborative skills (be able to interact with numerous colleagues and students), be effective in publishing, and have good skills in English (oral and written). International applicants who do not have English as their first language must prove strong English language writing skills and fluency. The post doc also needs to be independent and forward thinking as several team members are based abroad for part of the project. Most meetings and interactions are done via zoom and in English. Finally, the post doc will be expected to present results at international conferences. Knowledge of French is a plus for day to day living in Montpellier, but not required.

Supervisors and collaborators: The post doc will be directly supervised by the project PI Dr. Thomas L.P. Couvreur (leader of the couvreurlab.org group and based in Montpellier from August 2023). In addition, the postdoc will join a multidisciplinary team with strong skills in population genetics, modeling, and phylogenetic reconstruction ([DYNADIV](#)). GLOBAL is highly collaborative with numerous collaborators from across the globe, especially in tropical countries. This will provide opportunities for the post doc to interact with a wide range of researchers, especially for interpretation of results.

Place of Employment and Work: The place of employment and work is “Institut de Recherche pour le Développement” (IRD), UMR DIADE, DYNADIV team, 911 Avenue Agropolis, Montpellier France. Montpellier is a pleasant Mediterranean town with a vibrant and internationally recognized research community, especially in evolutionary biology (University of Montpellier).

Application deadline: *31th May 2023 (23.59 Paris time).*

Starting date: *1st September – 1st October 2023; but flexible.*

Application procedure: A short list of applicants will be selected by a committee shortly after the deadline for applications. An interview will be planned for short listed applicants, only via zoom, tentatively planned for June. Once the recruitment process is completed a final letter of rejection is sent to the deselected short listed applicants. The application must be in English and include as separate **PDF files:** a motivation letter (providing past experience and interest in working on tropical biodiversity, and explicitly stating that you are applying for the “post doc B: conservation” position), a 2-page max curriculum vitae, degree certificate, full list of publications (including in press or submitted or pre-prints, but not in pep), names and email of two recommenders (no recommendation letter should be sent in the application; recommenders will potentially be contacted directly afterwards). All interested candidates are encouraged to apply, regardless of their personal background. The title of the email must say “**Application post doc B: conservation**”.

Send applications to: annonaceae4ever@gmail.com

You will receive a confirmation of good receipt of your application. If not email me again.

Contact: All questions about the project or the employment conditions, can be directly addressed to Thomas Couvreur, thomas.couvreur@ird.fr

Websites:

www.couvreurlab.org

GLOBAL project: www.couvreurlab.org/erc-global

More info about Annonaceae: <http://annonaceae.myspecies.info/>