



Reference Number 142/2020

**DOCTORAL RESEARCHER (M/F/D)
ON THE PROJECT “ADAPTIVE EVOLUTION OF PLANT-FRUGIVORE INTERACTIONS ON
MADAGASCAR”**

Initially limited until 30 September 2021, an extension for further 2-3 years is possible and dependent upon successful renewal of DFG funding for iDiv (evaluation in spring 2021)

65 % of a full-time position

Salary: *Entgeltgruppe 13 TV-L*

Leipzig University seeks to fill the following position at the **German Centre for Integrative Biodiversity Research (iDiv)**, Flexpool, in Leipzig from 1 October 2020 onwards.

Background

The **German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig** is a national research centre funded by the German Research Foundation (DFG). It is located in the city of Leipzig and jointly hosted by the Martin Luther University Halle-Wittenberg (MLU), the Friedrich Schiller University Jena (FSU), Leipzig University (UL), and the Helmholtz Centre for Environmental Research (UFZ). For more information please visit: www.idiv.de.

The **Evolution & Adaptation research group (Dr. Renske Onstein)** focuses on the interchange between (macro-) ecology and evolution, to understand the global distribution of genetic, taxonomic and functional diversity. We investigate microevolutionary processes to understand how these play out over macroevolutionary time scales. Understanding these patterns and the processes underlying them is important for predicting how adaptable biodiversity is to current and future global change.

The Project

Madagascar harbours exceptional biodiversity, but this tropical hotspot also faces increasing threat from human activities and climate change. Plants with large, ‘megafaunal’ fruits are common across the flora of Madagascar, especially within the palm (Arecaceae) family. However, Pleistocene-Holocene extinctions of large-bodied ‘megafaunal’ fruit-eating and seed-dispersing animals (such as giant lemurs) may have hindered the dispersal of taxa with megafaunal fruits. In this project we aim to investigate the molecular, micro- to macroevolutionary consequences of dispersal limitation in palms, specifically focusing on adaptive evolution of a megafaunal-fruited palm, *Hyphaene coriacea*, using a comparative framework of Madagascar (all megafauna extinct) and mainland Africa (where *H. coriacea* is still frequently dispersed by elephants). Specifically, we aim to

- (1) identify candidate genes for fruit and seed traits important for plant-frugivore interactions,
- (2) pick up genetic traces of selection or adaptation in relation to dispersal by smaller-bodied frugivores, and
- (3) evaluate the macroevolution of candidate genes or gene families across the palm family.

This project integrates the fields of plant evolution, molecular evolution and plant-frugivore interaction ecology. It will be in collaboration with researchers from Hohenheim University (Professor Philipp Schlüter) and University of Miami (Professor Mauro Galetti), among others. Besides the salary, there is funding available for field and lab work, conference visits and participation in courses/workshops.

Tasks

- collecting genetic samples from *H. coriacea* individuals and populations on Madagascar and mainland Africa, and measuring their functional traits (part of these samples has already been collected);
- collecting ecological information about the seed dispersal effectiveness (e.g., using camera traps) and demography of *H. coriacea* in the study areas;
- using novel genomic and transcriptomic techniques (e.g., RAD-seq, RNA-seq) to infer candidate genes for functional traits and evaluate traces of selection;
- writing and publishing of scientific papers in peer-reviewed journals;
- presentation of results at international conferences;
- doctoral researchers at iDiv benefit from an inter- and transdisciplinary training and support by the graduate school yDiv

Requirements

- M.Sc. or equivalent degree in a project-related field (e.g. molecular biology, genetics, phylogenetics, population genomics, ecology and evolution)
- prior experience using molecular techniques, preferably with transcriptomics or bioinformatics, incl. the basics of scripting/programming for handling and statistically analyzing large genetic/genomic datasets
- prior experience with tropical natural history, fieldwork and basic living conditions is advantageous
- willingness to spend several months in the field (Madagascar/mainland Africa)
- excellent English communication skills (speaking and writing)
- innovative, able to work on his or her own initiative
- team-oriented and strong organizational skills, in order to manage this collaborative research project within an international consortium
- independent mind and the ambition to publish in internationally leading journals

Kindly send your application, quoting the reference number 142/2020, via our application portal at <https://apply.idiv.de>. While we prefer applications via this portal, hard-copy applications may also be sent to:

German Centre for Integrative Biodiversity Research – iDiv (Halle-Jena-Leipzig)

Dr. Renske Onstein
Deutscher Platz 5 e
D-04103 Leipzig

Submission deadline is 20 July 2020

All applications should include:

- cover letter (in English) describing motivation for the project, research interests and relevant experience
- complete curriculum vitae including names and contact details of at least two scientific references
- digital copy of M.Sc. certificate or equivalent
- PDF of one publication or thesis chapter (in English)

Queries concerning the application process should be directed to hr@idiv.de, for project-related questions, please contact Dr. Renske Onstein (renske.onstein@idiv.de). Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability. Please note that applying via email is not entirely secure under data protection law. The sender assumes full responsibility.

iDiv is committed to establishing and maintaining a diverse and inclusive community that collectively supports and implements our mission to do great science. We will welcome, recruit, develop, and advance talented staff from diverse genders and backgrounds.

Privacy information

The personal data contained within your application documents or obtained during the interview will be processed exclusively for the purposes of the selection process for the position advertised. The legal basis for such data processing is Section 11(1) of the Saxon Data Protection Implementation Act (SächsDSGD) in conjunction with the EU General Data Protection Regulation (GDPR). The controller for the application process within the meaning of the GDPR is the addressee of the application, as specified in the respective advertisement. When processing your application, your personal data will be passed on within Leipzig University to

- *members of the selection committee*
- *the human resources management teams*
- *the Commissioner for Equal Opportunities*
- *the Disability Officers and*
- *if necessary, the Staff Council*

as part of their organisational or statutory responsibilities.

Your personal data will be erased no later than six months after completion of the selection process. In accordance with the GDPR, subject to the relevant statutory requirements you have the following rights vis-à-vis the addressee of the application with regard to your personal data: right of access (Art. 15 GDPR); right to rectification of inaccurate personal data (Art. 16 GDPR); right to erasure (Art. 17 GDPR); right to restriction of processing (Art. 18 GDPR); and right to object to processing (Art. 21 GDPR). If you have any questions, please contact the Data Protection Officer at Leipzig University (office: Augustusplatz 10, 04109 Leipzig). You also have the right to lodge a complaint with the Saxon Commissioner for Data Protection.