

## 3 PhD positions in Tropical Ecology

# Drivers of insect diversity and their microbiome in the Peruvian Andes

Background: Tropical mountains are global biodiversity hotspots, yet most of their diversity remains unexplored, and diversity patterns and functional traits of most organisms are still poorly understood. This is particularly true for the holometabolous insects (e.g. butterflies & moths, bees & wasps, flies, beetles). Holometabolous insects contribute more than three quarters of all described animal species and perform key functions in ecosystem like herbivory, pollination or decomposition. In the DFG-funded project ANDIV (<https://www.andiv.biozentrum.uni-wuerzburg.de/>) we investigate patterns and drivers of species diversity, functional traits and microbiomes of insects along an elevation gradient in the Andes of Peru. The gradient has a completely natural forest vegetation and runs from the lowland Amazonian forests up to ca. 3500 m asl. In the ANDIV project, we assess insect diversity and biotic interactions using a broad range of classical field sampling methods combined with cutting-edge DNA metabarcoding techniques and experiments.

Requirements: We are seeking three highly motivated PhD students with strong interest and expertise in tropical ecology to complement the team. Two positions will be in the field of insect ecology and one in the field of microbiome research. Applicants should have a MSc. or Diploma degree in ecology or related disciplines, a strong interest in biodiversity research, skills in statistical data analysis (preferably in R) and scientific writing in English. Physical fitness and very good language skills in English are required; language skills in Spanish would be ideal. Applicants for the three positions in insect ecology should also have experience in field research on insects (e.g. insect monitoring, plant-insect interactions), practical skills in insect identification and ideally experience in the analysis of molecular data. Applicants for the position in microbiome research should have strong experience in molecular lab techniques and bioinformatics. The candidates are expected to work both individually and in close collaboration with all ANDIV projects and partners in Peru in an international project with significant times of field work in Peru.

We offer the following positions, which actively cooperate in Peru and Germany:

- 1) **Biodiversity and interactions of geometrid moths.** The PhD position will be located at the Institute for Zoology and Evolutionary Biology, University of Jena, Germany (<https://www.gunnarbrehm.de/>). For further information, please contact: Dr. Gunnar Brehm ([gunnar.brehm@uni-jena.de](mailto:gunnar.brehm@uni-jena.de)).
- 2) **Biodiversity and interactions of bees and wasps.** The PhD position will be located in the Department of Animal Ecology and Tropical Biology (<http://www.zoo3.biozentrum.uni-wuerzburg.de/en/>) at University of Würzburg. For further information, please contact: Prof. Dr. Ingolf Steffan-Dewenter ([ingolf.steffan@uni-wuerzburg.de](mailto:ingolf.steffan@uni-wuerzburg.de)).
- 3) **Biodiversity and interactions of the insect microbiome.** The PhD position will be located in the Biocenter of the LMU Munich (<https://www.biologie.uni-muenchen.de/personen/professoren/keller/index.html/>). For further information, please contact: Prof. Dr. Alexander Keller ([keller@bio.lmu.de](mailto:keller@bio.lmu.de)).

One PhD position on “**Biodiversity and interactions of dung beetles and dung flies**” (PI: PD Dr. Marcell Peters) has been already filled and the PhD student will complement the team.

Salary and conditions: Salary and benefits are according to public service positions in Germany (TV-L, 65%). Start date: **Preferably 1<sup>st</sup> July 2022**. The planned duration of the project is three years. We offer the membership in an international research group, modern facilities and a structured graduate training program. The Universities of Jena and Würzburg are equal opportunities employer and place particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply. Disabled persons with equivalent aptitude will be favored.

Applications: Please send your application as **one single pdf file** per email to Michaela Jäger ([michaela.jaeger@uni-wuerzburg.de](mailto:michaela.jaeger@uni-wuerzburg.de)) latest until **15th May 2022**. Applications should include a cover letter, a short summary of research interests, CV, complete certificates, and the names (with email addresses) of two potential referees. Please note that you can apply for one or multiple of the above-mentioned positions with the same application. Please indicate this in your cover letter.