

1 PhD position

(starting summer 2019 for 3 years)

Department of Animal Ecology and Tropical Biology, University of Würzburg

PhD position on the “Evolutionary Ecology of Sociality in Fungus-Farming Ambrosia Beetles”

(Application deadline: 30.6.2019)

We require

- MSc degree in either Biology, Entomology, Evolutionary Biology or Chemical Ecology
- Due to the interdisciplinary nature of the projects, successful candidates must be willing to become acquainted with methods from different fields.
- Experience working with insects is a plus.
- Proficiency in English and a good team spirit are a must.
- Knowledge on basic molecular methods, statistics (R skills), chemical ecology and bioinformatics are a plus.

We offer

- An exciting research project to build on a scientific career.
- A cooperative and highly ambitious young research group, as part of a vivid department.
- Opportunities to visit collaborating labs worldwide.
- Salary according to public service positions in Germany (TVL E13: 65%) for three years. The University of Würzburg is an equal opportunity employer, i.e. female scientists are particularly encouraged to apply and disabled applicants will be preferentially considered in case of equivalent aptitude.

We seek a highly motivated biologist with a keen interest in the ecology and evolution of insect social behaviour to join our research group at the University in Würzburg, Germany (www.insect-fungus.com).

Description: Our main models are bark and ambrosia beetles (AB), which live in subsocial to eusocial societies within wood, where they cultivate fungi on walls of their tunnels. Both sociality and fungiculture evolved in several independent lineages under different ecological conditions, levels of relatedness and ploidy. They remained poorly studied although they are excellent models to test pending evolutionary questions.

Details of the Project:

- Is it possible to artificially select for/against sociality in AB?
- Is division of labour chemically regulated in AB societies?
- How do AB suppress pathogens and promote cultivars in their fungus gardens?
- How does AB social evolution affect the evolution of fungiculture and *vice versa*?

Methods: In our work we combine field studies with lab experiments and apply an interdisciplinary approach, combining selection experiments, experimental assays, and culturing methods with state-of-the-art molecular (e.g. metabarcoding) and biochemical (e.g. GC-MS) techniques.

The Host: We are one of a few labs in the world to study AB. For details on our projects see www.insect-fungus.com or directly contact Dr. Peter Biedermann (peter.biedermann@uni-wuerzburg.de; +49(0)17699819095).

The University of Würzburg offers tremendous expertise on social insect behaviour, evolution, chemical ecology and molecular ecology. Würzburg itself is a vivid student city in one of the most beautiful areas of Germany.

Application: Please submit the application (as a single pdf file including a letter of motivation, a short summary of research interests, a CV, certificates, and contacts of two potential referees) via e-mail to info@insect-fungus.com until **June 30th 2019**.