Climate-driven plant extinctions

The International Masters Program “Earth System Dynamics and Evolution” funded by the Elite Network of the Bavarian State Ministry of Science and The Arts invites applications for a post-doctoral candidate position (Entgelt-/Bes.Gr. TV-L E13 or A13 100%, up to 5 years) at the University of Bayreuth (UBT), Germany.

The position will **start 1st October 2026** (fixed start date).

Research: *Quantifying climate-driven extinction risk in plants across time and space*
This project aims to understand climate-driven plant extinctions in the fossil record. We seek to identify the mechanisms shaping extinction risk across space and time, focusing on range dynamics, environmental change, and the temporal structure of climatic stressors. By integrating fossil plant occurrences with trait data and paleoenvironmental reconstructions, the project will quantify how functional traits, spatial distributions, and rates of climatic change interact to shape extinction selectivity through time. We will develop a rigorous quantitative framework linking spatiotemporal fossil patterns to trait-based and environmental predictors while explicitly addressing dating uncertainty, taxonomic harmonization, and heterogeneous sampling. The position will be based within a vibrant, internationally visible research environment of the BayCEER at the University of Bayreuth, closely connected to cutting-edge research in biogeography and ecosystem modeling, and collaborate with researchers from University of Erlangen. We seek an ambitious quantitative paleontologist, or an ecologist ready to work with fossils, to advance integrative, high-impact research at the ecology-paleontology interface.

Teaching: The candidate will contribute to teaching in paleobiology and deep-time ecology and to developing a module on Ecological Niche Modeling tailored to paleontological applications. Depending on expertise and interests, the candidate is also expected to support instruction in statistics, programming, and foundational ecology. The teaching load is up to 5 SWS (Semesterwochenstunden), corresponding to approximately 3-4 contact hours per week during the semester. Contributions to broader program activities, such as curriculum development, student mentoring, and collaborative teaching initiatives, are encouraged and will be aligned with career stage. The candidate will be based in Bayreuth, but must be willing to travel to Erlangen on a regular basis.

Required skills:

- PhD in Paleontology, Ecology, Biogeography, Earth System Science, or a related discipline, with a strong quantitative focus
- Demonstrated expertise in statistical modeling and quantitative data analysis, including spatial analyses, species distribution modeling, or related approaches applied to ecological or fossil datasets
- Advanced programming skills (e.g., R or Python) and experience in reproducible research workflows
- Strong interest in interdisciplinary research at the interface of ecology and paleontology, with enthusiasm for integrating fossil data and ecological theory
- Interest for understanding Earth System processes and their complex interactions
- Demonstrated capacity for independent research
- Willingness to conduct independent research and pursue a habilitation
- Good reporting and presentation skills
- Excellent level of written and spoken English
- Ability to work independently, to critically assess own results, and to cooperate within a wider research team across disciplines

Advantageous skills:

- Experience with Bayesian statistics, simulations or modelling uncertainties

Application guidelines

For your application, please send a single PDF to es-master@fau.de. The subject of the email should refer to the individual project/position you are applying for.

For **post docs**, the PDF should comprise:

- Cover letter (indicating which project/position you are applying for, and stating your background and motivation for the project) (max. 1 page)
- CV, including a list of relevant publications (max. 3 pages)
- A short research and teaching concept (max. 2 pages)
- University degree certificates
- Contact details for two potential references

Deadline for applications: 09.04.26.

For further information on this subproject contact: Prof. Dr. Lisa Hülsmann and

Prof. Dr. Manuel Steinbauer, Bayreuth Centre for Ecology and Environmental Research, UBT, e-mail: lisa.huelsmann@uni-bayreuth.de and manuel.steinbauer@uni-bayreuth.de.