



Two post-doctoral research positions in marine paleoecology

Within the framework of the ERC Synergy project SEACHANGE, the Institute of Geosciences (Paleontology group) at the University of Mainz, Germany, invites applications for two postdoc positions to reconstruct food web dynamics through compound-specific isotope analysis (CSIA) of shell organics etc. The University of Mainz has a vibrant campus with over 32,000 students and amongst others hosts the Institute of Geosciences, the Department of Chemistry and two Max Planck Institutes, which are equipped with state-of-the-art facilities.

The ERC Synergy project SEACHANGE, a joint research project of the universities of Exeter, York, Copenhagen and Mainz, aims to quantify the impact of major cultural transitions on marine ecosystem functioning and biodiversity. Target areas include NW Europe, eastern Australia and the west Antarctic Peninsula. The group at Mainz will identify temporal changes of the food web structure and determine the major primary producer groups at the base of the food web. For this purpose, **one postdoc will focus on $\delta^{15}\text{N}$ analysis of individual protein-amino acids via GC-C-IRMS, the other postdoc on $\delta^{13}\text{C}$ analysis via HPLC and GC-IRMS + EA.** Proteins will be extracted from absolutely dated, live-collected and fossil shells, predominantly of long-lived species. Growth patterns (annual 'rings') in the shell will be used to temporally contextualize the protein samples (sclerochronology). Although CSIA is an established, though highly challenging method, the specific application to shell organics requires significant methodological refinement, which is one of the major tasks for both postdocs. Both researchers will also help setting up the new laboratory devoted to CSIA.

Candidate profile:

- PhD degree (above average grade) in Earth Sciences, Biology or Chemistry (or related field)
- Outstanding motivation and enthusiasm
- Broad scientific background in isotope geochemistry, ideally with previous experience with CSIA; a basic knowledge of invertebrates and marine ecology is advantageous
- Ability and willingness to conduct chemical laboratory work
- Strong knowledge of (organic) chemistry
- Solid experience with data analysis and statistical methods
- Computer literacy, in particular, skillful use of MS office package, graphics software etc.
- Positive attitude toward field work
- Excellent written and oral communication skills in English
- Ability to write publications for peer-reviewed scientific journals
- Ability to work independently and self-guided, but likewise within an interdisciplinary research team

The fixed-term appointment will be for a maximum of three years and ideally starts on 1 May 2020. Salary according to E13 TV-L (100% position) includes fringe benefits (health insurance etc.). The University of Mainz is an equal opportunity employer. Disabled persons with comparable qualifications receive preferential status.

Interested individuals are invited to submit an application package including a motivation letter explaining why they apply and how they meet the hiring criteria outlined above, CV, copies of certificates (high school, BSc and MSc/diploma, PhD), degree transcripts (plus English or German translation) including an explanation of the scoring system, and addresses of at least two referees as a single pdf to Prof. Dr. Bernd R. Schöne, schoeneb@uni-mainz.de, Institute of Geosciences, University of Mainz, Joh.-J.-Becher-Weg 21, 55128 Mainz, Germany. Application Deadline: 28 Feb 2020. Note, application review will begin immediately. The position will remain open and applications will be reviewed until the position is filled. Further information about the research focus of the Applied and Analytical Paleontology research team can be obtained at <http://www.paleontology.uni-mainz.de>