

Job 3: Early Stage Researcher ESR C4 Biodiversity Modeling

Institute/ Supervisor

Giessen – Tom Wilke

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Drivers of Pontocaspian biodiversity Rise and Demise: modelling

and predicting Pontocaspian biodiversity change and crisis

Summary

The Justus Liebig University Giessen is looking for prospective candidates with a background in biodiversity modelling and an interest in interdisciplinary palaeoenvironmental and biodiversity research in the Pontocaspian region (Black Sea, Caspian Sea and Anatolia and surroundings). Description The successful candidate will be employed as researcher without a PhD and enrolled as PhD student to complete a PhD thesis within the contract period of 3 years to model and predict Pontocaspian biodiversity change and crisis. This project integrates the various information sources on natural (biotic and abiotic) and anthropogenic drivers of biotic changes inferred in parallel projects in empirical modeling approaches to generate informed spatially explicit risk estimates for species and communities and to predict future changes (forward modeling) under different Global Change scenarios. It thus serves as baseline for identifying areas of highest conservation management priority in the region. Candidate natural drivers and anthropogenic drivers for the models include climate, lake basin geochemistry, nutrient regimes and invasive species and will be obtained from parallel projects. Models will be validated using backward modelling of data derived from the short cores and the high resolution age model generated in parallel projects. Forward modelling will be applied to the modern Kura biota (local scale) and to the Pontocaspian area as a whole (regional scale). This project specifically aims to (1) assess the relative contribution of natural vs. anthropogenic drivers to the current Pontocaspian biodiversity crisis using MaxEnt and Generalized Dissimilarity Modelling, (2) develop a spatially explicit risk model for the Holocene biodiversity crises by projecting the model outputs from aim 1 in space and time, (3) use backward modelling by hindcasting the Holocene environmental parameters and validating the accuracy of the model results with available faunal successions, and (4) perform forward modelling to predict future biodiversity changes under different Global Change scenarios. Secondment (host, timing, length & purpose) – Leiden, NR (month 12, 2 months): modelling Leiden, FPW (month 20, 2 months): palaeontology and habitat reconstruction. This project will include a secondment at Naturalis, Leiden (NL) for coordinating modelling exercises and inclusion of results and scenarios of the PCIS (Pontocaspian Information System) developed at Leiden. The candidate will enroll in an extensive Network Training Program. Research Fields

biodiversity, biodiversity modeling Career Stage

Early stage researcher or 04 yrs (Post graduate) Research Profiles

First Stage Researcher (R1) Type of contract

Temporary employment with the Federal State of Hesse. Full time 40 hrs/wk Salary a month/year

A salary that matches the MSCAITN and local rules, a monthly mobility allowance of 600, gross and a possible monthly family allowance of 500, gross. Benefits In accordance with Marie Skłodowska Curie Regulations Information about the Marie Skłodowska Curie actions is available at <http://ec.europa.eu/research/mariecurieactions/> http://ec.europa.eu/research/mariecurieactions/aboutmsca/quickguide/index_en.htm

Financial and other technical information is available at
http://ec.europa.eu/research/mariecurieactions/aboutmsca/actions/itn/index_en.htm

www.pontocaspian.eu

Address details of workplace Department of Animal Ecology and Systematics Systematics and Biodiversity Group Justus Liebig University Giessen H.-Buff-Ring 26-32 (IFZ) D-35392 Giessen, Germany Specific demands from your country/ institute Ability to work in an internationally oriented environment, including fluency in English M.Sc. Applicants are invited to submit the following documents: Letter of application (max 2 pages); Resume (Curriculum vitae); The names, position and e-mail addresses of at least two persons that can be contacted for reference; List of publications, including submitted manuscripts or papers in press, if any; Transcript of BSc and MSc diploma. The required documents should be submitted by email to

sollicitaties@naturalis.nl

before 16 April 2015.

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