

**Subject:** 3 Postdoc Positions in Biodiversity, Uni Potsdam Germany

The University of Potsdam (UP) together with the Freie Universität Berlin (FU) and the other partners in the Berlin-Brandenburg Institute for Advanced Biodiversity Research (BBIB, [www.bbib.org](http://www.bbib.org)) have formed a consortium to implement a major new interdisciplinary research initiative, the "Bridging in Biodiversity Science" (<http://www.bbib.org/bridging-in-biodiversity-science.html>) project funded by the Federal Ministry of Research and Education (BMBF). The department of Plant Ecology and Conservation Biology at UP (<http://www.uni-potsdam.de/en/ibb/researchgroups/fullprofessors/plant-ecology.html>) offers three PostDoc positions in two different work packages of the project.

Within the work package "ScapeLabs Experimental Platform", the UP seeks to fill the following two positions:

1 PostDoc: Spatially-explicit modeling of rapid transitions in community dynamics

Tasks: Theoretical concepts such as the meta-community or -ecosystem framework, spatial food web theory or the conceptual resilience framework are well-suited to address specific aspects of biodiversity and ecosystem function dynamics under dynamic environmental conditions.

However, there is still a need for developing and refining integrative models and concepts that address the mechanisms affecting rapid transitions in biodiversity dynamics and ecosystem functioning at different spatiotemporal scales or across different systems (e.g. aquatic and terrestrial) or multiple trophic levels.

In close linkage with ongoing experimental work at the experimental landscape Laboratories (Agro-, City, - and Lake-ScapeLabs, <http://www.bbib.org/experimental-platform.html>), the PostDoc will test and refine existing and develop new models and concepts of rapid community changes at the landscape scale. S/He will also be responsible for the theory-driven, conceptual coordination of the cross-system, landscape scale experimental 'ScapeLabs' platforms. The research will strongly improve our ability to predict the response of biodiversity to climate or land use changes and other environmental pressures.

Requirements: The successful candidate will have a strong expertise in spatial biodiversity concepts and the development of ecological models. A sound knowledge in programming (e.g., C++) is required. Applicants must hold a doctoral degree, have proven publication skills and should be able to work independently. Organisational skills, high motivation and the willingness to work as part of a team within an interdisciplinary project are essential.

1 PostDoc: Experimental design, meta-analyses and data management

Tasks: The novel, landscape-level experimental ScapeLabs framework (<http://www.bbib.org/experimental-platform.html>) requires new ideas and approaches to data generation through well-designed experiments, data (meta-)analyses, and data management.

Together with experts from other BBIB-partners, the PostDoc will optimize and harmonize experimental designs at the different ScapeLabs, support and conduct overarching statistical (meta-)analyses, and contribute to an overall data infrastructure of the BBIB project, including developing and maintaining a 'ScapeLabs' database. The specific focus of the work within this range of topics can be adapted to the specific skills and interest of the successful candidate.

Requirements: The successful candidate will have a strong expertise in at least one of the following fields: (i) design of landscape-level experiments and statistics, (ii) advanced statistics and meta-analyses, (iii) data and database management. Applicants must hold a doctoral degree, have proven publication skills and should be able to work independently. Organisational skills, high motivation and the willingness to work as part of a team within an interdisciplinary project are essential.

Within the work package "Aboveground-belowground coupling", the UP seeks to fill the following position:

1 PostDoc: Modelling the resilience of coupled plant-soil community dynamics

Tasks: Rapid transitions in ecosystems can be strongly mediated by plant-soil interactions.

Shifts in above- and belowground communities and their average trait values can be expected to impact the resilience and resistance of the system. In close collaboration with the department of Biodiversity Research/ Systematic Botany (Prof. Dr. Jasmin Joshi) at UP and partners at the FU Berlin the PostDoc will develop new or refine existing spatially-explicit, high-resolution simulation models that dynamically simulate feedbacks between above- (i.e. plant) and belowground (i.e. local root-inhabiting and rhizosphere-associated biota) community dynamics on the basis of trait compositions, soil properties, climate and land use.

S/He will also contribute

to synthesizing the role of above-belowground interactions for rapid transitions and to measuring and evaluating selected key root traits.

Requirements: The successful candidate will have a strong expertise in at least one of the following fields: (i) process-based computer simulations, (ii) empirical and experimental analyses of plant-soil interactions, (iii) empirical and experimental analyses of plant or soil community dynamics. (ii) and (iii) should go together with a strong interest in process-based ecological modelling. Applicants must hold a doctoral degree, have proven publication skills and should be able to work independently. Organisational skills, high motivation and the willingness to work as part of a team within an interdisciplinary project are essential.

Applications and working environment: We offer a stimulating research environment within an interdisciplinary, collaborative context. All three positions (100%, i.e.

40 hours per week) are

limited to three years and start on March 1<sup>st</sup>, 2016. The salary is in accordance with the German public service 13 TV-L (area east). Contracts are time-limited according to the Academic Fixed- Term Contract Law (WissZeitVG).

UP is an equal opportunity employer, determined to increase the proportion of women in successful scientific careers, and particularly encourages women to apply. Preference will be given to disabled applicants with the same qualifications.

Enquiries or questions should be directed to Prof. Dr. Florian Jeltsch (jeltsch@uni-potsdam.de).

Please email complete application documents as a single pdf-file including the precise position reference (more than one are possible), a letter of motivation, CV, copies of relevant degrees, and names and contact details of two referees as soon as possible but no later than January 27<sup>th</sup>, 2016 to Maria Martinez (martine1@uni-potsdam.de).

Please note: Interviews will take place between 01. and 05. February 2016.