



Postdoc Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

Open Postdoc position for CSC scholarship candidates 2015

The postdoc position is only offered to [Chinese](#) who graduated with a [PhD degree from a Chinese university](#).

<u>Department/Institute:</u>	Institute of Biology
<u>Subject area:</u>	Community Ecology
<u>Professor / Research Group:</u>	Prof. Dr. Jana Petermann
<u>Number of open positions:</u>	1
<u>Project title:</u>	Negative soil feedbacks and coexistence in plant communities

Project description:

The mechanisms of species coexistence in diverse communities are still poorly understood. Traditionally, ecological research has linked coexistence in plant communities to complementary resource use. Recently, top-down control by consumers and pathogens has become an important part of plant coexistence theory (Petermann et al. 2008; Mordecai 2011). This project will focus on the latter pathway, using field and greenhouse experiments with temperate grassland plants and Arabidopsis relatives to elucidate mechanisms of coexistence based on negative density dependence of antagonistic interactions (Bukowski & Petermann 2014). The work will involve designing complex ecological experiments, growing, measuring and harvesting plants, both in potted greenhouse set-ups and under outdoor conditions in the field. Furthermore, soil will be collected from field sites and analyzed for macro- and microinvertebrates, fungi and general pathogens. Work with aboveground herbivores or other members of the grassland food web are possible. The candidate will expand the project using own ideas.

Literature:

Bukowski, A.R. & Petermann, J.S. (2014) Intraspecific plant-soil feedback and intraspecific overyielding in Arabidopsis thaliana. Ecology and Evolution, 4, 2533-2545.

Petermann, J. S., A. J. F. Fergus, L. A. Turnbull, and B. Schmid. 2008. Ecology 89:2399-2406.

Mordecai, E. A. 2011. Pathogen impacts on plant communities: unifying theory, concepts, and empirical work. Ecological Monographs 81:429-441.

Academic requirements:

Suitable candidates will have a PhD in Ecology, Plant Sciences, Environmental Sciences, Zoology or a related field and an excellent academic track record, preferably with international publications. Candidates should be able to work independently and have experience in ecological data collection, experimental design, field methods in ecology, plant sciences, data analysis and statistics (preferably using R) and scientific writing.

Link to professor/contact and further information:

http://www.biologie.fu-berlin.de/en/arbeitsgruppen/zoologie/ag_petermann/index.html

Please note:

In a first step the complete application should submit to the Beijing Office for evaluation by November 21, 2014. Please don't contact the professor before. She will get in contact with you after having received the complete application.