Three Postdoc positions in a Biodiversity-Ecosystem Functioning Experiment (Ecology/Soil Science)

Within the Research Unit of the large-scale interdisciplinary Jena Experiment (www.the-jena-experiment.de) funded by the Deutsche Forschungsgemeinschaft (DFG), three two-year postdoctoral positions are available. In the Jena Experiment, plant diversity is manipulated on roughly 600 experimental grassland plots. The focus of the experiment is the role of diversity of biogeochemical cycling and species interactions. The Jena Experiment has been running since 2002, and a large number of ecosystem processes have been measured. We are looking for highly motivated people that are interested in contributing to the synthesis of data and theory. *The call is subject to funding.*

Biodiversity–ecosystem functioning research is one of the most vibrant research areas in current ecology as it is a research field under time pressure and of integral relevance for human well-being. The Research Unit of the Jena Experiment has a unique role in this context by taking an interdisciplinary and integrative approach to capture whole-ecosystem responses to changes in biodiversity and by focusing on the mechanisms of biodiversity–ecosystem functioning relationships. The value of the Jena Experiment has increased over time as now long-term plots allow capturing representative biodiversity effects and the unprecedented wealth of data enables unique syntheses and meta-analyses. The interdisciplinary approach (collaboration between, e.g., animal ecologists, plant ecologists, soil ecologists, soil microbiologists, soil chemists, soil hydrologists, and modelers) is unique and highly innovative. The next funding phase will focus on within- and across-experiment syntheses and meta-analyses complemented by a mechanistic joint experiment to separate the abiotic and biotic drivers of ecosystem functioning.

We offer an international and interdisciplinary research environment. The employers seek to increase the number of women in those areas where they are underrepresented and therefore explicitly encourage women to apply. We are committed to employing more handicapped individuals and especially encourage them to apply.

To apply for a position, please follow the instructions given in the job descriptions below.

The University of Leipzig seeks a

Postdoc in Ecology/Biodiversity

Responsibilities

Research within the DFG project *The Jena Experiment* (http://www.the-jena-experiment.de/) focusing on resource complementarity in plant communities with different species richness levels. The project aims to integrate existing evidence on above and belowground measurements to explore a comprehensive picture of complementarity in grassland ecosystems. We will synthesize experimental evidence from different biodiversity experiments in grasslands in a meta-analysis. Moreover, we will compile all trait data available for plants from the Jena experiment and perform a systematic screening of the importance of functional diversity for complementarity in various ecosystem functions and finally combine the results using path analysis. Successful candidates will need to organize a workshop in the beginning, compile, analyze and interpret the data, write publications and present the results at national and international conferences.

Requirements

Ambitious, communicative and motivated researcher with PhD in plant ecology, or related disciplines. The candidate should have a strong interest in process- and system-oriented research, particularly performing syntheses and meta-analyses in R. Fluent in English is required.

Additional benefits

The research will be carried out within a 2-year project (starting in spring/summer of 2016). Payment will be according to the German standard tariff (100% TVöD-E13). We offer an interesting position in an international, interdisciplinary research group at a lively university environment in Leipzig (http://www.zv.uni-leipzig.de/) as well as international working experiences with project partners across Europe and the USA.

Application

Please send your complete application by January 31st 2016 to PD. Dr. Alexandra Weigelt, Systematic Botany and Functional Biodiversity, Institute of Biology, University of Leipzig, Johannisallee 21, 04103 Leipzig, mentioning "**COMPLEMENTARITY**". Applicants should send their CV, copies of certificates, a statement on motivation and names (with email address) of two references by email – in one single pdf file – to the following two email addresses: alexandra.weigelt@uni-leipzig.de and liesje.mommer@wur.nl. Further information can be obtained via A. Weigelt (alexandra.weigelt@uni-leipzig.de).

The University of Tübingen and Karlsruhe Institute of Technology (KIT) jointly seek a

Postdoc in Soil Science/Ecosystem research

Responsibilities

Research of the groups of Prof. Oelmann (Geoecology, University of Tübingen) and Prof. Wilcke (Geomorphology and Soil Science, KIT) within the DFG project *The Jena Experiment* (http://www.the-jena-experiment.de/) will focus on element fluxes. While the importance of biodiversity for many ecosystem processes has been proven in short-term experiments, it remains unknown which long-term effects exist, particularly with respect to element cycling. We have collected a long-term data series of the concentrations of chemical nitrogen and phosphorus species in ecosystem solutions (rainfall, throughfall, soil solution) in fortnightly resolution since 2002. The Postdoc will be in charge of mathematically decomposing components (event, seasonal, long-term trend) of time series and relate these to plant diversity and other biotic and abiotic variables available in *The Jena Experiment*. Tasks include gap filling of time series by means of e.g., Bayesian modeling, time series analysis, and interpretation of results. Presentation of the results at national and international conferences and publication in peer-reviewed international journals is expected.

Requirements

Dynamic, serious, and motivated researcher with PhD in Geoecology, Geoscience, Physical Geography, Landscape Ecology, Environmental Sciences, Forestry, Agricultural Sciences, Biology, Geochemistry, or Environmental Chemistry or related disciplines. Strong interest in process- and system-oriented research, particularly in performing syntheses and meta-analyses. The successful candidate should have extended knowledge of biogeochemical processes in ecosystems and the statistical treatment of big data sets with a focus on time series analysis. Good communication skills and commitment to interdisciplinary research particularly focusing on environmental issues are required. Fluency in English and German is required. We particularly encourage female applicants to apply for this position. Disabled persons will be preferred in case of equal qualification.

Additional benefits

The research will be carried out within a 2-year project (starting as soon as possible in 2016) and will be conducted in Tübingen and Karlsruhe. Payment will be according to the German standard tariff (100% TVöD-E13). We offer an interesting position in an international, interdisciplinary research group at a lively university environment in Tübingen (www.uni-tuebingen.de) and Karlsruhe (www.kit.edu) as well as international working experiences with project partners across Europe and the USA.

Application

Please send your complete application to Yvonne Oelmann, mentioning "**Element cycling**". Applicants should send their CV, copies of certificates, a statement on motivation for studying soil science/ecosystem research and names (with email address) of two references by email – in one single pdf file – to the following email address: yvonne.oelmann@uni-tuebingen.de. Evaluation procedure will start February 1st (application deadline January 31st).

Leipzig University of and Friedrich Schiller University Jena seek a

Postdoc in Ecology/Biodiversity

Responsibilities

Plants support an enormous diversity of consumer species that interact with each other in complex ways. One of the most important challenges facing ecologists is to determine how changes in plant diversity will influence the ability of ecosystems to support the diversity of consumers above and below the ground. We seek a post-doctoral candidate to undertake data synthesis focused on testing hypotheses related to how changes in plant diversity influence the 1) temporal and 2) structural stability of consumer communities.

Requirements

Applications from scientists with expertise in food web and/or community analyses including, but not limited to, functional diversity metrics, species coexistence theory, and network analyses will be considered. Applicants with expertise in biodiversity and food web stability are especially encouraged to apply. Experience collaborating with empiricists and theoreticians is especially appreciated. Applicants must have an excellent record of publication and strong quantitative skills. Prior experience with international working groups is desirable.

Additional benefits and application

The successful candidate will work as part of our collaborative team based primarily at Leipzig University and Friedrich Schiller University Jena, which both contribute to the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig in Leipzig, Germany. These institutions are among the top in the world for detailed species diversity data sets, data synthesis, and international working groups. The working environment is highly interactive and provides many opportunities for collaborations and professional development. The position offers a TV-13 salary for two years. Applications are due 31 January. The ideal starting time for the position will be in May 2016.

To apply, email a cover letter stating your research accomplishments and interests, a curriculum vitae, two representative publications, and the names and contact information for three references to: Drs. Jes Hines (jessica.hines@idiv.de) and Anne Ebeling (anne.ebeling@uni-jena.de).