

The Department of Geobotany of the Ruhr-University Bochum invites applications of PhD candidates for two projects on

Functional diversity of beech-endophytic fungi and their roles in litter decomposition

Endophytic fungi asymptotically colonize all plants investigated so far. However, factors structuring their communities are still poorly understood. Furthermore, their function in ecosystem processes remain unclear, but recent studies indicate a prominent role in early litter decomposition in forests. In the framework of the Biodiversity Exploratories (<http://www.biodiversity-exploratories.de>), the impact of land-use on community composition of endophytes and their seasonal activity profiles shall be analysed applying Next-Generation-Sequencing (NGS) of DNA and RNA.

The first project will concentrate on diversity patterns across various land-use intensities and seasons using barcode markers. The second project will combine metatranscriptome analyses in environmental litter samples and experimental setups to unravel the functional role of endophytic fungi in litter decomposition at the molecular level.

Success of both projects demands deep knowledge in molecular genomics/transcriptomics, ecological and environmental statistics, and fungal ecology. Experience in these fields is a plus for applicants, while high motivation to acquire the required knowledge, in particular in using suitable bioinformatics tools, is a prerequisite. In return for their efforts, the projects offer the successful candidates competitive education in applying the most recent molecular and bioinformatics tools, as well as the opportunity to conduct the research project largely independently and to interact in the large research consortium of the Biodiversity Exploratories. Assuming the final confirmation from the funding agency, the positions will be funded for 3 years with 65% E13.

The Ruhr-Universität Bochum is an equal opportunities employer and particularly encourages applications from women and disabled people.

Applications including CV, a motivation letter (max. two pages) and names of two potential referees should be submitted electronically no later than 7th of March 2014 to Prof. Dr. Dominik Begerow (dominik.begerow@rub.de) and/or Dr. Derek Peršoh (derek.persoh@rub.de).