

SPITFIRE Doctoral Training Partnership (DTP)

Research Experience Placement 2017

Project Brief

Applications close at Noon, Friday, 2 June 2017

Lead Supervisor:	Bjorn Robroek
Email:	Bjorn.robroek@soton.ac.uk
University/Research Organisation:	University of Southampton
Department:	Biological Sciences
Project Title:	Does plant community composition affect ecosystem processes?

Total Student Support Costs: £	£2500 (£200 for 10 weeks plus £500 research and training support grant)
<i>Based on a minimum of £200/week full time for a minimum of 8 weeks and maximum of 10 weeks and a £500 Research and Training Support Grant.</i>	

Proposed Start Date: Monday, 03 July 2017	Proposed End Date: Friday, 8 September 2017
<i>Projects should run over the summer vacation and we recommend that projects will have terminated by 15 September 2017.</i>	

Brief Summary – please provide a brief summary (maximum 300 words) of the project.

Peatlands lock away large amounts of carbon, making research on their functioning in a changing climate highly relevant to society. The carbon sink function of peatlands is largely the result of an imbalance between carbon uptake and loss. Whilst the importance of linkages between plant species and belowground communities for sustaining ecosystem processes such as carbon and nutrient cycling is long acknowledged, little is actually known on the role of plant community composition, and especially its trait composition, on the capacity of peatlands to sequester carbon. Such knowledge would, however, provide tools to target the conservation of peatland functions.

Using a plant removal in the Store Mosse National Park (SMNP) in Southern Sweden, established in 2011 by the PI, you will study the role of plant taxonomic and functional community composition on CO₂ and CH₄ fluxes. Hence, you will measure gas fluxes using closed chambers and an Infrared gas analyser (CarboCap GMP343) from a series of established plots. Further, the student will embark in measuring a series of functional traits of all the plants in the communities, and describe the plant composition in terms of a functional indices.

Under supervision of Dr. Bjorn Robroek, but partly based in the SMNP, tyou will get full training in peatland ecology, gas flux measurements, and trait measurements. In the national park, you will work in close collaboration with the staff of the Nature Reserve, and have access to their facilities (accommodation, library, IT network). This also give you the fantastic opportunity to learn about day-to-day conservation issues in a large nature reserve. Apart from the opportunity to engage in

fieldwork in Sweden, you will experience training in experimental design, data collation and analysis. Whilst the data remain property of the PI, you will be involved in dissemination of results arising from this project.

Proposed procedure for appointing students, including selection criteria:

Please identify specific criteria that should be considered for the selection of placement students e.g. specific quantitative skills that may be required, subject knowledge etc. If a student has been pre-selected, or the research area has been led by the student, please provide the student's contact details, and a summary of their suitability for the SPITFIRE DTP REP programme.

I am looking for a motivated student with an interest in plant community ecology. Selection will be based on motivation letters and CV. Some experience in plant ecology or environmental sciences would be an asset.

The Store Mosse National Park is the largest peatland expanse that is not in Lapland. Hence, you will be working in a remote area. Some previous experience in traveling would therefore be positive, but I welcome applications from non-experienced travellers as well.