PhD opportunity

[open to non-UK citizens]

Dirty downfall: impacts of acute acid N deposition events on Arctic vegetation

Supervisors: Dr Gareth K Phoenix (Sheffield) & Professor Malcolm C Press (Birmingham)

Extreme nitric acid episodes in the Arctic

Arctic ecosystems are one of the world's remaining pristine wilderness areas, but these systems can be particularly sensitive to global change. Recent research shows that enrichment of some Arctic ecosystems may be occurring in the form of sudden and abrupt nitrogen deposition events, where dirty air masses originating from industrialised Europe pass over the Arctic and deposit a large proportion of the annual total N deposition as N rich acidic rain in just a few days. The combined impact of additional N supply in an acidifying form may be considerable with impacts on plant growth, diversity and carbon cycling.

The PhD

This project aims to understand how extreme and sudden nitric acid deposition events impacts on plants of the High Arctic. Using field plots to simulate these N inputs, particular attention will be paid to quantifying plant growth responses, changes in productivity and diversity, and on the capacity of these systems to act as a carbon sink.

This project provides an exciting opportunity of undertake field work in the Norwegian High Arctic on Svalbard including periods of two to three months each year of summer field work. The work forms part of a larger consortium (NSINK: see http://www.nsink.group.shef.ac.uk/) investigating the sources, transport, atmospheric chemistry and fate of tropospheric and stratospheric N deposition in polar regions.

The project would suit a highly motivated, independent thinker with a background in/enthusiasm for plant ecology/biology and global change.

Eligibility:

- not open to UK citizens
- must not have lived in the UK for more than 12 months in the 3 years immediately prior to starting this position.
- UK citizens can apply if they have legally resided outside the UK for 3 of the 4 years before starting this position.
- Must be less than four years since the applicant obtained a degree which would qualify them to embark on PhD study (e.g. Masters degree in most European countries).
- must not have a PhD.

Informal enquiries can be made to Dr Gareth Phoenix, email : g.phoenix@sheffield.ac.uk

The post is available for 3 years with an anticipated start date in January but earlier or later starts are possible.

Applications can be made at www.sheffield.ac.uk/jobs and searching for job reference R06722 (closing date is 3 November 2008)