**PhD projects on Climate change impacts on terrestrial ecosystem productivity and nutrient cycling**

We are seeking applicants for each of two PhD projects in climate change impacts on the productivity of terrestrial ecosystems, both based in Tasmania. Scholarship applications are due on 25 March 2015. Each scholarship is valued at $25,849 p.a. (2015 rate), with the possibility of a $5,000 p.a. top-up for suitably qualified candidates.

The projects are supported by an Australian Research Council Discovery Project grant to investigate how changes in rainfall timing influence the ability of terrestrial ecosystems to respond to the rising concentration of carbon dioxide (CO2) in the atmosphere. We know that plant productivity should rise as the concentration of CO2 in the air increases, but nutrient and water availability interact to prevent this in some years but not in others. The overarching aim of this research is to discover just what conditions lead to the maximal response to elevated CO2.

One PhD project will investigate plant ecophysiological responses in the field to water and nutrient availability and CO2 concentration. The second project will investigate how rainfall patterns and CO2 concentration influence ecosystem nutrient cycling, particularly of nitrogen. Both projects will be based in Hobart, Tasmania and involve field measurements in a newly established Free Air CO2 Enrichment (FACE) experiment. This work is globally innovative and cutting-edge and follows on from results recently published by A/Prof. Hovenden in the world’s leading scientific journal, *Nature*.

Both projects will involve a combination of field, laboratory and glasshouse work, but will make great use of the FACE facility, of which there are very few in the world. The projects would suit highly motivated individuals with an interest and experience in at least one of the following areas:

- Plant biology, especially ecophysiology or ecology
- Agricultural science including agricultural chemistry
- Soil biology
- Terrestrial ecosystem ecology
- Global change biology.

**What kind of person could do this project?** The projects have a significant field work component and the successful candidate is also expected to undertake laboratory experiments and analytical work. The projects are suitable for either biology or agricultural science graduates and would especially suit those interested in climate change impacts and management.

**Eligibility**

The scholarships are open to both domestic (Australian and New Zealand) and International candidates. Applicants should have experience in plant ecophysiology or ecology and previous experience in either gas exchange or soil chemistry would be beneficial. Applicants must be proficient in spoken and written English, and have a current driver's license. Successful applicants will hold a first class Honours or Masters degree or an equivalent combination of qualifications and experience. Selection of applicants will be based on merit and previous publication is highly regarded. The projects are only available for full-time
study and should be available to start early in the second-half of 2015. Scholarships are available for 3 years with the possibility of a six-month extension.

**When and how to apply:** Applications will be assessed in a two-round process. Preliminary applications should be made to A/Prof. Mark Hovenden (contact details below) and must include a statement of your background and interest in the project, your Curriculum Vitae, and a copy of your undergraduate academic transcripts. Applications for the first round close 25 March 2015. Applicants selected to proceed to the second round will then need to apply through the University’s On-line Scholarship Application Process, in which applications close 8 April 2015.

**For further information, to enquire or apply:** Please contact A/Prof. Mark Hovenden.

Email: Mark.Hovenden@utas.edu.au; Phone: +61 (3) 6226 7874.

**First-round applications are due to A/Prof. Hovenden Wednesday 25 March 2015.**