

Position Description

*School of Forest and Ecosystem Science
Faculty of Land and Food Resources
The University of Melbourne*



THE UNIVERSITY OF
MELBOURNE

POSTDOCTORAL FELLOW – SMOKE & PLANT PHYSIOLOGY RESEARCH

- Position No:** 0015759
- Organisation Unit:** School of Forest and Ecosystem Science
- Budget Division:** Faculty of Land and Food Resources
- Classification:** Postdoctoral Fellow, Level A
- Salary:** \$45,944 - \$62,346 p.a. (\$58,081 PhD entry level)
- Superannuation:** Employer superannuation contributions of 9 percent.
- Employment Type:** This is a full-time (fixed-term) position available for 2.5 years commencing 1 March 2007 (or earlier by agreement).
- Other Benefits:** Salary packaging and staff training and development opportunities.
- Current Occupant:** Vacant
- How To Apply:** Apply online at <http://jobs.unimelb.edu.au> using the above position number or title as keyword.
- For enquiries contact:** Dr Tina Bell, +61 3 5321 4181, mobile 0418 366 873, email tbell@unimelb.edu.au
- Closing date:** 31 December 2006

1 Position Summary

The appointee will continue to develop and maintain an active research program in the field of fire research focusing on the effects of smoke from vegetation fires on plants and ecosystems. The appointee will contribute to research excellence at the School of Forest and Ecosystem Science in conjunction with the Bushfire Cooperative Research Centre and the Victorian Department of Sustainability and Environment by delivering high quality research as a member of the Fire Research and Development team. The appointee will be involved in research in the following areas:

- production and chemical composition of smoke from biomass burning in native forests and other ecosystems, mainly in Victoria, but also in other areas in Australia,
- the effect of components of smoke, in particular, volatile organic compounds, on plant physiology,
- fire and land management policy and procedures.

The incumbent for this position will be based primarily at the Creswick Campus of the University of Melbourne, but will be required to work for periods of time in New South Wales (University of New South Wales) and the United States (University of California, Berkeley). The appointee may be involved in teaching depending on their skills and interests.

The incumbent will be responsible for reporting research from the School of Forest and Ecosystem Science at the University of Melbourne to the Bushfire Cooperative Research Centre and the Victorian Department of Sustainability and Environment. The incumbent may also be responsible supervision of technical staff and postgraduate students.

2 Selection Criteria

2.1 Essential

- A PhD or evidence of thesis completion and submission with a high likelihood of successful completion in a relevant field of research such as vegetation ecology or plant physiology.
- Proven ability to develop, administer and see through to completion fully replicated field- and laboratory-based experiments to meet the needs of research contracts and proposals.
- Relevant experience in collection of samples from a range of laboratory and field conditions (including four wheel drive access).
- Experience in development of protocols for analytical and/or sampling systems.
- A strong publication record in peer-reviewed journals and knowledge of and ability to write research grants.

- A good record of working as a member of a research team with a wide diversity of research interests and at a variety of locations.
- Capacity to communicate research results to a broader audience including the general public and stakeholders.

2.2 Desirable

- Knowledge of fire and land management agencies in eastern Australia (Victoria, New South Wales and Tasmania) or Western Australia.
- An understanding of prescribed burning strategies and/or fire behaviour.
- Knowledge of the theory and application and experience with mass spectrometry techniques.

3. Special Requirements

- Possession of a valid Driver's Licence.
- Attendance at prescribed, experimental and wildfires.
- Sample collection may require working outside normal hours and travelling to remote locations for several days, with minimal supervision and working in isolation.
- The position is based at Water Street, Creswick but the appointee will be required to work interstate and overseas for periods of time.

4. Key Responsibilities

- Development and testing of new research in plant ecophysiology and fire science ensuring that the needs of different stakeholders are met.
- Analysis and interpretation and written and oral reporting and publication of research findings.
- Publication of scientific findings in national and international journals.

4.1 Specific Duties

Research

- Development of experimental design and sample collection associated with the project titled: '*Smoke composition and impact on human health and ecosystems*' (Project 2.2) of the Bushfire Cooperative Research Centre.
- Data analysis and interpretation, written and oral reporting and publication of research findings for the above project.
- Close collaboration with the Project Leader and other researchers, technicians and students associated with fire research within the School.
- Liaison with other researchers, stakeholders and organisations associated with the Bushfire Cooperative Research Centre and the Victorian Department of Sustainability and Environment.
- Active participation in research seminars and conferences (nationally and internationally).

Teaching

- Supervision of Honours and postgraduate research students by negotiation.

Services to School and University

- Service in meetings and committees as required.
- Active participation in School organisation and administration as appropriate.

5. Occupational Health and Safety (OHS) and Environmental Health and Safety (EHS) Responsibilities

All staff are responsible for the following safe work procedures and instructions.

5.1 Employees must:

- cooperate with the University in relation to activities taken by the University to comply with OHS and EHS legislation,
- comply with the OHS and EHS manuals,
- adopt work practices that support OHS and EHS programs,
- take reasonable care for their own health and safety and the health and safety of other people who may be affected by their conduct in the workplace,
- seek guidance for all new or modified work procedures,
- ensure that any hazardous conditions, near misses and injuries are reported immediately to the supervisor,
- participate in meetings, training and other environment, health and safety activities,
- not wilfully place at risk the health or safety of any person in the work place,
- not wilfully or recklessly interfere with or misuse anything provided in the interest of environment health and safety or welfare.

5.2 Supervisors are responsible for:

- developing new work procedures, as required, in conjunction with relevant persons,
- providing all staff with relevant OHS and EHS information in an appropriate manner,
- providing personal protective equipment and clothing if hazards cannot be fully eliminated,
- providing adequate supervision through technical guidance and support
- identifying and controlling hazardous conditions,
- providing appropriate facilities for safe storage, handling and transport of hazardous substances,
- ensuring that all accidents and incidents are reported.

6 Other Information

6.1 Organisation Unit

The School of Forest and Ecosystem Science is headquartered at the Creswick Campus of the University, situated 130 km from Melbourne. The School was founded in July 2004 and is the culmination of a long standing research partnership between the University of Melbourne and the Victorian Department of Sustainability and Environment. The new school comprises more than 50 scientists in basic and applied fields, which cover many aspects of forest and ecosystem science from the molecular to the ecosystem level, including:

- forests and water
- communities, people and forests
- fire ecology and management
- forest industries and wood products
- forest, climate change and greenhouse research
- native forest ecology and restoration
- tree developmental biology and forest biotechnology
- tree ecophysiology
- plantations and tree health

The School is a partner in three significant Cooperative Research Centres including the Bushfire CRC, CRC Wood Innovations and the CRC for Forestry.

The School's unique courses cover higher education at the undergraduate, graduate and postgraduate level. They include the development of a complete understanding of forest biology from the cell to the ecosystem level. The acquisition of "cutting edge" techniques is emphasised, from the molecular scale at the laboratory bench to the landscape scale in geographic information systems. Courses offer the integration of scientific studies and industry applications.

5.2 Budget Division

The Faculty of Land and Food Resources is the largest faculty of its kind in the southern hemisphere providing specialist education, research and training in the vital fields of agriculture and agribusiness; natural, environmental and resource management; forestry; food production horticulture; and dairy and food technology, production and marketing. Across a diversity of disciplines "Land and Food" equips students with the skills necessary to pursue a successful career in a wide variety of disciplines.

The Faculty of Land and Food Resources has been established to provide internationally competitive education and research in agriculture, ecosystem science, resource management and related areas, offering industry and students a mutually beneficial investment opportunity.

The Faculty offers industry-relevant training from highest level doctorates and undergraduate degrees, to short courses at four campuses in major production areas of south east Australia. The strong connections to industry, strengthened by an active research and education program, ensure the work of the Faculty is relevant, whilst also creating opportunities for students to carry out industry-based research.

5.3 The University of Melbourne

The University of Melbourne is an international research and teaching university. We employ people of outstanding calibre and offer a unique environment where staff are valued and rewarded.

Founded in 1853, the University commenced teaching its first students in 1855. The University has over 42 000 students in a broad range of professional disciplines. Over 8000 students are higher degree students. The University has over 6000 staff members.

The University is one of Australia's leading research-based universities, with an international profile through its reputation for scholarship and teaching. It is a founding member of Universitas 21, an international federation of universities.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University. The Academic Board is responsible to Council for academic matters. Reporting to the Vice-Chancellor are the Deans of each Faculty, two Deputy Vice-Chancellors, and the Senior Vice-Principal. Reporting to the Senior Vice-Principal are Vice-Principals of Human Resources, Information, Property & Buildings, and University Development; the Vice-Principal & Chief Financial Officer; the Vice-Principal & General Counsel; and the Vice-Principal & Academic Registrar.

This position description is approved by:

Occupant: Date:

Supervisor: Date:

Head of Organisation Unit: Date: