POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow in Community Ecology  
Organisation Unit: School of Biological Sciences  
Position Number: NEW  
Type of Employment: Fixed Term, Full Time  
Classification: Academic Level A (Research)

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (65). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.

V5 October 2016
UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

The Faculty of Science is recognised as a powerhouse for some of the world's leading scientists, teachers, science programs and commercial outcomes. The Faculty is one of the largest Science groupings in Australia, with approximately 1100 (equivalent full-time) staff, and about 7500 (equivalent full-time) students.

Throughout its Schools and Centres, the Faculty unites the disciplines of agriculture and animals, biomedical and biological sciences, chemistry, earth sciences, food sciences, geography, marine science, maths and physics, the environment and veterinary science.

With strong links between the enabling and applied sciences, UQ researchers and graduates are working on a wide range of groundbreaking projects from the molecular characterisation of drug resistant bacteria that affect piglets through to finding better treatments for illness and rehabilitation of the environment.

Information about the Faculty may be accessed on the Faculty's web site: http://www.science.uq.edu.au/

The School of Biological Sciences is part of the Faculty of Science and is one of the largest and most successful of its type in Australia, with 48 full-time academic staff, and over 200 enrolled PhD students. The School has broad expertise across ecology and evolution, molecular and quantitative genetics, paleobiology, developmental biology, behaviour, plant and animal physiology, and conservation biology. Our research programs involve a diverse array of taxa, ranging across microbes, animals and plants, including a particular focus in the areas of marine biology and entomology. Unique opportunities for biological research are provided by our proximity to a stunning array of marine and terrestrial subtropical habitats and their endemic biodiversity. A number of research programs in the School take advantage of major model-organism systems, including Drosophila, C. elegans, and Arabidopsis, and many include a strong quantitative and modelling focus.

Further information and details of the research interests of academic staff may be accessed on the school's web site at http://www.biology.uq.edu.au

Prof. Margaret Mayfield, the supervisor of this position, is the Head of the School of Biological Sciences, Director of the Ecology Centre and runs a research group that includes a full-time lab manager, one other postdoc, seven PhD students and two undergraduate honours students. Dr. Mayfield and her research group work on applied and theoretical questions in community ecology, focusing primarily on natural plant and insect communities in human-modified landscapes. More information about Dr. Mayfield and her research group is available on her lab website: http://www.mayfieldplantedologylab.org/site/Home.html

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

V5 October 2016
The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.
DUTY STATEMENT

Primary Purpose of Position

To engage in full time research, as a postdoctoral research associate, in the Mayfield plant ecology lab. The topic of specific research activities is negotiable but is expected to relate to theoretical community ecology with an emphasis on plant and insect communities. Potential topics include theoretical questions about species coexistence dynamics and the maintenance of biological diversity, experimental studies of community diversity, plant-plant or plant-animal interactions and coexistence or complex species interactions.

This position and is not associated with a specific research project and thus the successful candidate will have extensive freedom in deciding what topics/projects they would like to work on. We are particularly interested in ecologists with strong quantitative skills, experience using a diversity of statistical approaches and who are interested in empirical tests of ecological theory. Some field experience is desirable but not essential. For candidates interested in field-based projects, there is an expectation that field projects will utilise Prof. Mayfield’s established field sites in winter annual wildflower communities of SW Western Australia. There will also be the opportunity to use data from or collect new data in established field sites in central Tasmania.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Conduct cutting edge research in the field of plant and/or theoretical community ecology.
- Test ecological theory using previously collected or new data collected by the successful candidate.
- Prepare and publish peer-reviewed scientific publications.
- Analyse data using modern ecological statistical and modelling tools, such as: mixed effects modelling, population modelling (interaction matrices etc.), network analyses.
- Ability to manipulate and analyse data in R
- Willingness to travel for field work
- Attend and present research at national and international conferences
- Contribute to the Mayfield research group as a senior lab member
- Participate as a co-mentor (with Prof Mayfield) of honours and PhD students

Other

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the University’s Code of Conduct
- requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School
- the adoption sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures
- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University.

Organisational Relationships
This position reports to Prof Margaret Mayfield.

Important Dates
Position to start early to mid-2018

SELECTION CRITERIA

**Essential**
- PhD in ecology or related area of biological sciences and/or applied maths.
- Experience conducting statistical analyses
- Familiarity with coding in R
- Proven capacity to publish research in high quality peer reviewed journals
- License to drive a motor vehicle

**Desirable**
- Familiarity with basic experimental design in the context of observational and experimental field ecology
- Knowledge of modern concepts of coexistence theory, community ecology and functional ecology
- Ability to conduct common ecological statistics, such as mixed effects models, preferably in R.
- Experience with or an interest and the necessary computing skills to learn some of the following types of analyses: network analyses, structural equation modelling, Bayesian modelling, population modelling with interaction matrices.
- Plant taxonomic/plant ID training (formal courses or experience working with natural plant communities, experience identifying plants in the field)
- Experience working/living in isolated/harsh field conditions
- Experience conducting ecological research with little direct supervision.
- Experience directing research teams and/or undergraduates in the field
- Experience measuring plant functional traits
- Experience working on naturally occurring plant communities (rather than crops or horticultural species)
- Experience germinating, growing and maintaining non-horticultural/agricultural plants in natural and laboratory conditions
- Ability to work collaboratively with colleagues.
- Willingness to be an active participant in lab group activities, such as lab meetings, lab projects and mentoring of students.
Seminar

Applicants invited for interview may be expected to present a seminar in conjunction with the selection interview process.

Qualification Verification

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

The University of Queensland values diversity and inclusion.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples.

Applications are also encouraged from women.