

January 2023

PhD position

Terrestrial Invertebrate Ecology

Community structure and ecology of braided river terrestrial invertebrate biodiversity

We have an opening for a student to undertake doctoral research investigating the terrestrial invertebrate biodiversity of braided river floodplains. The PhD position is part of a programme of work designed to understand and manage the rich biodiversity of New Zealand's braided rivers. The student will be based at [Te Whare Wānanga o Waitaha | University of Canterbury \(UC\)](#), will work with Prof Angus McIntosh (UC) and Dr Tara Murray of the [Department of Conservation – Te Papa Atawhai](#), and will benefit from being part of [UC's Freshwater Ecology Research Group \(FERG\)](#) and a team of freshwater and terrestrial researchers working on braided rivers.

Project background

The gravel bars and other terrestrial habitats occurring between channels on braided rivers are home to a unique and highly diverse, but poorly understood, invertebrate fauna. These 'braidplain' habitats are [under threat](#) from weed and pest invasion, climate change and encroachment, and the fauna they support are central to [many complex interactions linking the aquatic and terrestrial environments](#).

Research aim and approaches

Using existing datasets supplemented by their own sampling across gradients in braidplain habitats, the doctoral student will develop a research project to investigate the functional composition and drivers of braidplain invertebrate diversity. This will involve undertaking quantitative analyses of invertebrate assemblages to inform a) understanding of what constitutes a healthy, functionally diverse braidplain invertebrate community, and b) approaches to conservation management of the braidplain that will best support a healthy, functionally diverse invertebrate community.

This research is jointly funded under a [UC Connect Scholarship](#) by UC and New Zealand Government's [Department of Conservation – Te Papa Atawhai \(DOC\)](#).

Who you are

The successful applicant will have the potential to carry out insightful research, as well as the initiative and personality to communicate the results to a wide variety of groups, including the Department of Conservation, other scientists, stakeholders, the general public and iwi (Māori tribal) partners. You must be able to work within a team, and can expect high quality mentoring



Further Information

PhD study at the University of Canterbury
www.canterbury.ac.nz/postgrad/

School of Biological Sciences
www.canterbury.ac.nz/science/schools/biological-sciences/

Freshwater Ecology Research Group
www.ferg.org.nz



and support. Experience in practical field ecology, invertebrate taxonomy and ecological data analysis using R are essential, and knowledge of the functional and community ecology of invertebrates would be an advantage. You should also have a full driver's license and a track record of managing field-work health and safety. Knowledge of te ao Māori, or a willingness to learn, is also particularly valuable. These characteristics will be demonstrated by your previous research experience, training, interests and other activities, and underpinned by either a Bachelors degree with honours or a Masters degree, in ecology or a related field, that contains a significant research component (demonstrated by associated outputs like a publication or thesis). We particularly welcome applications from individuals from under-represented groups.

Once selected, the preferred candidate would then need to apply to study at The University of Canterbury and meet the [institutional criteria](#) for entry prior to the scholarship being confirmed (check whether you meet these requirements [here](#)). You

should ideally be able to start the position in the first half of 2023. For international applicants, you would need to apply for and receive the appropriate student visa to gain entry to New Zealand.

Who you will work with

[Angus McIntosh](#) will be your main mentor, but you will also work closely with Dr Tara Murray from the Terrestrial Biodiversity Fauna Science Unit of the Department of Conservation – Te Papa Atawhai. You will be based at [Te Whare Wānanga o Waitaha | University of Canterbury \(UC\)](#), primarily work within the [Freshwater Ecology Research Group](#) at UC, and benefit from the connections within the Department of Conservation – Te Papa Atawhai. These groups are diverse and interdisciplinary in thought and approach, but focused on solving environmental problems. They all strive to cultivate an open, safe and supportive environment that values creativity, diversity, integrity and collaboration, and recognises Te Tiriti o Waitangi (the Treaty of Waitangi).

Funding and start date

The 3-year PhD Scholarship provides an annual stipend of NZ\$28,000 a year tax-free and will cover full university fees, and the project has additional funding available towards research expenses.

How you apply

To apply, please provide:

1. a cover Letter that outlines your motivation, interests and experience, and contains a brief (one paragraph) idea for how different approaches could be combined to address the research aims;
2. a curriculum vitae; and
3. contact information for two referees able to comment on your academic and other achievements.

Applications should be emailed as **a single pdf file** with your name in the file name to angus.mcintosh@canterbury.ac.nz by **28 February 2023** with “PhD in braidplain invertebrates” in the subject line.