



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*



**NIWA**  
Taihoro Nukurangi

## MSc Scholarship Available

# Importance of stream-wetland refuges for kōaro populations

### Overview

**Whakahohetia Ngā Wai Kāinga** is a focus study within the Toitū Ngā Taonga Waimāori research programme (see below) that aims to support Te Arawa's place-based prioritisation and implementation of adaptation interventions that will support the resilience of their cultural keystone species and iwi/hapū communities under a changing climate.

Kōaro (*Galaxias brevipinnis*) once supported an important customary fishery for Te Arawa iwi/hapū. Along with other galaxiid species, kōaro have been greatly impacted by land use change and the introduction of non-native fish species. Catchment modifications, exotic and invasive species, and other man-made pressures have decimated this taonga species in the Te Arawa lakes, where only small, relict populations now remain. Climate change is likely to expose these populations to further challenges.

This MSc study will focus on the ecology of **kōaro in a stream-wetland mosaic along the shoreline of Lake Ōkāreka**. A significant population has been discovered in this habitat and it is thought to be an important source of recruits for the kōaro metapopulation in Lake Ōkāreka. The study will address the population and trophic ecology of kōaro in this habitat over the course of a year through monthly sampling. The study will aim to describe the population demography (including size classes) through time and establish prey sources to better understand the food-web dynamics of kōaro using this stream-wetland refuge. There are opportunities to learn/use eDNA approaches and assess the habitat preferences of other kōaro populations across the Te Arawa region.

### About this MSc opportunity

Our team is seeking a highly motivated and skilled MSc candidate to work on this collaborative project with the University of Waikato, Te Arawa Lakes Trust, Kusabs & Associates and the National Institute of Water and Atmospheric Research.

The successful candidate will have an undergraduate degree in ecology or environmental science. Good written communication skills are desired. You will be conscientious, detail oriented, hard-working, eager to do field work, and have a positive attitude.

MSc supervision will be provided by Dr Frank Burdon, with support from Dr Ian Kusabs and Te Arawa Lakes Trust where needed.

### Entry Requirements

To be eligible, you need to meet the [enrolment requirements](#) of the University of Waikato. Ideally you will be ready to commence study as soon as possible. At Te Whare Wānanga o Waikato, the University of Waikato, we embrace equity and diversity; therefore, we strongly encourage applicants with the relevant capabilities from all backgrounds to apply.

## Scholarship details

### Value & duration

To provide financial support throughout this MSc journey the successful candidate will receive a stipend of NZ\$24,000 (\$1,333.33 per month), plus full tuition fees, for 18 months. There is some flexibility with the starting date but it could be as soon as 8<sup>th</sup> of July 2024.

Te Whare Wānanga o Waikato will provide access to world-class research facilities and opportunities for professional development.

### Location

The successful candidate will be based at Te Whare Wānanga o Waikato in Hamilton.

## Application process

To apply for this opportunity, please submit the following documents to Dr Frank Burdon ([frank.burdon@waikato.ac.nz](mailto:frank.burdon@waikato.ac.nz)):

- A letter outlining your motivation for applying for this MSc opportunity (maximum 2 pages).
- Your comprehensive CV, highlighting your achievements and relevant experience.
- Contact details for at least two referees.
- Academic transcripts may be requested to demonstrate your educational background and eligibility for this opportunity.

Review of applicants begins as soon as possible and will continue until the vacancy is filled. Frank Burdon will let you know whether you have been shortlisted for this vacancy and will advise you of the next steps.

Interviews will be conducted either in person or via video conferencing. Upon approval from a selection committee that will include Soweeta Fort-D'ath (Te Arawa Lakes Trust), Dr Deniz Özkundakci (Te Whare Wānanga o Waikato), Dr Ian Kusabs, and/or Dr Erica Williams (NIWA), the successful applicant will be guided through the full Masters enrolment application at the University of Waikato.

## Key contacts

Dr Frank Burdon, [frank.burdon@waikato.ac.nz](mailto:frank.burdon@waikato.ac.nz)

### **About Toitū Ngā Taonga Waimāori**

*The overarching vision of the Toitū Ngā Taonga Waimāori research programme is to co-develop climate change vulnerability assessments and predictive decision support tools that are able to reflect freshwater cultural keystone species (CKS), and the place-based cultural practices, knowledge systems and behaviours of iwi/hapū/whānau. This evidence-base will inform the spatiotemporal design of priority actions, plans and policies needed by iwi/hapū to support rangatiratanga, kaitiakitanga, increase food security, biodiversity and the resilience of CKS regionally and nationally under a changing climate.*