PhD Scholarship Opportunity

Kōura Movement Ecology and Passage Requirements

Project Overview

Kōura (freshwater crayfish) are endemic to Aotearoa New Zealand and play a vital role in freshwater ecosystems, yet the effects of river fragmentation on their movement and survival remain poorly understood. This PhD project will investigate the movement ecology and fish passage requirements of kōura, using a thriving population on the Buller Plateaux (a fish-poor landscape where kōura dominate) as a model system. Findings will directly inform the design of culverts and other instream structures to maintain population connectivity, supporting sustainable road-network development and compliance with New Zealand's fish passage regulations.

This project will investigate:

- Riverine movement ecology of kōura (field-based biotelemetry study)
- Effects of culverts on kōura movement ecology (field-based biotelemetry study)
- Effects of substrate and water velocity on kōura movements (laboratory-based swim tunnel experiments)
- Design of culverts for effective passage of kōura (laboratory-based flume experiments)

Host Institutions & Supervision

This project is a collaboration between Lincoln University, Earth Sciences New Zealand and Bathurst Resources Ltd, offering access to leading freshwater ecology expertise, field sites on the Buller Plateaux, and dedicated laboratory facilities for swim-tunnel and flume experimentation.

Funding

This scholarship is funded by Bathurst Resources Ltd with in-kind support from Lincoln University and Earth Sciences New Zealand.

- Stipend: NZ$35,000 per annum
- Full tuition fees covered for 3 years
- Research costs including funding for conference attendance and travel

Supervisory Team

- Dr Issie Barrett *Lincoln University*
- Dr Kristy Hogsden *Earth Sciences New Zealand*
- Dr Paul Franklin *Earth Sciences New Zealand*
- Advisor: Campbell Robertson *Bathurst Resources Ltd*

Candidate Profile

- A strong Honours or Master's degree in ecology, freshwater science, environmental science, or a related field
- Interest or experience in fieldwork, biotelemetry, and/or experimental laboratory research
- Strong quantitative and analytical skills; valid driver's licence an advantage

How to Apply

To apply, please send a CV, contact details of two academic references, and a cover letter outlining your research interests and suitability to isabelle.barrett@lincoln.ac.nz. Applications will be accepted until a suitable candidate is identified. Project start date: ASAP.