

Opportunity for PhD project with industry top-up stipend: How important are carp in contemporary food webs of the Murray-Darling Basin?

We are offering an exciting opportunity for a PhD candidate to join the [Centre for Applied Water Science](#) at the University of Canberra in partnership with [CSIRO Environment](#) to study the food-web role of invasive carp within Australia's Murray-Darling Basin.

Project description

Carp are a highly abundant, invasive fish species in the Murray-Darling Basin (MDB) and are known to cause significant negative impacts on native fish and the broader aquatic ecosystem. [The Australian government is currently poised and considering whether to support the release of a virus to assist in the species' control](#). However, little is known about the importance of carp in contemporary food webs of the MDB. This project will determine the importance of carp in food webs across different habitat types and environmental conditions in the MDB. The project will also examine the potential impact of carp removal on food webs and assess likely winners and losers in the native ecosystem.

There is a broad scope for the project to include a combination of field, experimental, and/or modelling approaches depending on the skills and interest of the candidate. For instance, field work could include the sampling of carp populations in rivers and wetlands with collection of tissues to assess carp diet and contribution of carp to the energy requirements of predators such as large-bodied fish and waterbirds. Quantitative approaches could include building of dynamic food-web models to simulate scenarios of carp removal from the community.

Research environment

The position is based at the Centre for Applied Water Science (CAWS) within the [Institute for Applied Ecology \(IAE\)](#) and [Faculty of Science and Technology](#) at the University of Canberra. The centre has strengths in basic and applied research to address complex environmental problems. Resources for the project include field vehicles, field equipment, and experimental mesocosms at the University of Canberra. The IAE typically has a cohort of 20-30 PhD students and maintains a program of graduate seminars, social events, and administrative support to enhance the PhD experience. The Australian PhD is a 3.5-year program which is largely research, with graduate training opportunities rather than extensive formal coursework. The candidate will work in close collaboration with researchers at CSIRO Environment.

The candidates will be supervised by [Dr Darren Giling](#) and [Prof Ross Thompson](#) at the University of Canberra with external co-supervision and guidance from CSIRO researchers [Dr Alison King](#), [Dr Paul McLnerney](#), [Dr Heather McGinness](#), and [Dr Brenton Zampatti](#).

Eligibility

To be eligible, the applicant must have a first-class Honours degree or four years of undergraduate study in a relevant field coupled with a publication record to establish first class equivalence, and personal attributes conducive to working constructively and productively as part of research team. Candidates may also be considered if they have a research-focussed Masters degree or equivalent in a relevant field.

This project will suit a candidate with interest and experience in fields including food-web ecology, community ecology, or invasion ecology. Experience in experiments involving animals, statistical analyses, and a willingness to conduct fieldwork in remote locations are also desirable. Alternatively, students with experience and interest in quantitative modelling are encouraged to apply as the project can be tailored to suit this skill set.

Scholarship

To undertake this project the candidate will be required to be eligible and apply for a primary scholarship, with the assistance of the supervisory team.

One potential primary scholarship is the Australian Government Research Training Program (RTP) Stipend Scholarship (AUD\$29,863 per annum tax free; 2023 rate). General information on the RTP stipend and information on applying at the University of Canberra can be found [here](#). However, applications to the HDR Application Portal should only be made following invitation from the supervisory team (for initial applications please see 'Application instructions' below).

Contingent on being awarded a primary scholarship, a three-year industry top-up scholarship from CSIRO (AUD\$10,000 per annum) is available for the candidate.

Application instructions

Interested individuals should submit their application by email to Dr Darren Giling (darren.giling@canberra.edu.au). Please attach a single PDF file with a 1-page statement on your interest in the project and your experience, a curriculum vitae, academic transcripts, and the names and contact information of 3 referees.

The project will remain open until filled, and we encourage applicants to apply early. The anticipated start date is in the first half of 2024.

Please contact Dr Darren Giling (darren.giling@canberra.edu.au) with any queries.