

PhD Scholarship: Developing a captive breeding program for a threatened fish species



Project description:

The Stocky Galaxias is a newly described small fish which is only known to occur in the headwaters of Tantangara Creek, upstream of the Tantangara Reservoir in NSW. Very little is known about its ecology and environmental

requirements. Its small distribution is restricted by the absence of salmonids, but it is now also threatened by Snowy 2.0. A severe decline in distribution and abundance, or extinction of the species is projected if salmonid or Redfin perch invasion occurs in the habitat of Stocky Galaxias. One suggested way to save the species is to establish a captive breeding and restocking program.

There are four components that need to be resolved for captive breeding and re-stocking to be successful. Firstly, defining husbandry requirements (stocking densities, temperature ranges, water quality tolerances, lighting, optimal tank setups). Secondly, adult conditioning and spawning (feeding and nutrition, spawning techniques - hand stripping, constructed habitat or hormone induction). Thirdly, larval rearing techniques (optimal conditions, disease management), hatching (fertilisation rates, optimising hatch), nutrition (advancing to first feed, progression to bigger feed, weaning to pellets) and grow out (maximising larval growth, transfer to bigger facilities, harvest methods, transport, and restocking strategies). The PhD will be structured around resolving these key knowledge needs.

For this PhD project we are seeking a candidate to be part of a multi-disciplinary team of CSU and NSW DPI ecologists, and aquarists. The candidate must possess the ability to research and deploy novel techniques to the production and grow-out of a threatened native species in a closed-system environment. The successful applicant will have access to state-of-the-art lab equipment, research laboratories and facilities through both CSU and NSW DPI. It will suit someone with an attention to detail with a genuine love of fish.

Under the mentorship of highly experienced researchers and conservation managers, the candidate will be supported in their continued training as a researcher and will gain exposure to researchers and employment opportunities across the academic, public and private sector, both in Australia and internationally. There are significant opportunities to connect with future employers as part of this work.

Place of Employment and Place of Work:

The candidate will be enrolled in the Institute of Land Water and Society. The primary place of employment would be the Albury Campus of Charles Sturt University. Fieldwork to the Snowy Mountains may be required.

Salary:

Stipend range: \$27,596- \$43,110 (tax free) per year over 3 years with generous support in the form of operational expenses and technical staff assistance from government research facilities. There will be the potential to supplement the stipend by undertaking a limited amount of casual work on related fisheries projects to diversify skills, in accordance with the university's employment rules for scholarship students.

Selection Criteria:

All scholarship applications are assessed against three common selection criteria:

Previous Academic Performance: (70% of the assessment). This assessment considers the nature and level of the applicant's highest, relevant qualification and grade point average.

Research and/or Professional Experience: Evidence of an applicant's research achievements and relevant professional experience (15% of the assessment). This includes such aspects as peer-reviewed research outputs, high esteem academic awards and prizes, relevant research or professional experience.

Research Alignment and Supervisor Capacity at CSU: Alignment with strategic research priorities and strengths contributes up to around 15% of the assessment. This includes the strength of alignment with the [CSU Research Narrative](#); the supervisory capacity and the strength of the research environment within the field of research; and the expected impact and end user engagement of the proposed research.

Commencement:

Starting date will be February 2022 (Session 1).

Expressing an interest:

Applicants will need to [apply for enrolment](#) and also send an expression interest (including a full CV and a brief cover letter addressing the selection criteria of no more than two pages) outlining your experience and research interests to Dr Lee Baumgartner, Charles Sturt University (lbaumgartner@csu.edu.au; 0427 070 056).

Closing Date:

The closing date for applications (including enrolment application, CV and expression of interest) is 22nd October 2020. Interviews will be held after the closing date.

Citizenship:

The opportunity is **only** open to Australian citizens, Australian residents or those eligible to study in Australia under the [commonwealth research training program](#). Please check your availability to apply prior to submitting an application.