

Investigating the effects of river flow regime on plant reproduction and recruitment

This project offers an exciting opportunity to work with leading riparian ecologists from The University of Melbourne and DELWP's Arthur Rylah Institute to help better manage environmental flows to benefit riverine plants.



How can we manage our rivers to best promote riverine plant reproduction and recruitment?

River regulation and subsequent changes to flow regimes have dramatically impacted riverine ecosystems globally. Increasingly, water is allocated via environmental flows to improve river ecosystem health. Delivery of environmental flows typically aim to replicate parts of a natural flow regime to improve population outcomes for riverine biota. While monitoring of the effects of environmental water has been conducted for decades, there remains many key knowledge gaps for how flows effect vegetation. In particular, there is a need to better understand how environmental flow delivery influences the reproduction and recruitment of plants to informing waterway management for vegetation outcomes.

This project will investigate how flow regime affects different stages of plant recruitment from flowering to the establishment of new plants. The project will be undertaken as part of the Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP) and based with the Waterway Ecosystem Research Group (WERG) – a world leading research group renowned for its supportive and collegiate culture. This will provide the successful applicant with a uniquely valuable work environment as part of a multidisciplinary team of eco-hydrologists, geomorphologists, stream ecologists and riparian ecologists. Furthermore, the close partnership with the Arthur Rylah Institute and DELWP will facilitate collaborative research and the effective translation of findings into policy and management; with ultimate benefits for riverine health in Victoria.

We are offering a PhD top-up Scholarship of \$10,000 per annum, plus fieldwork expenses of \$5,000 per annum for a highly competent and enthusiastic student to undertake this research. The student will need to obtain Australian Government Research Training Program Scholarship or Melbourne Research Scholarship at the University of Melbourne. Thus, a first-class honours or master's degree, and/or evidence of publishing in international peer-reviewed scientific journals will be essential. Information regarding scholarships and admission for the University of Melbourne can be found at: study.unimelb.edu.au.

Postgraduate scholarship applications close on the 31st October 2021.

The successful applicant will have an appreciation of plant and aquatic ecology and good quantitative skills. Importantly, this project requires an independently-motivated candidate with excellent communications skills as you will be required to work effectively with researchers across disciplines and industry practitioners. The preferred starting date for this project is Jan 2022.

Applicants should submit an expression of interest, including a cover letter outlining your interest in the research and relevant skills and experience, a CV, academic transcript and contact details for two academic referees.

Please send your EOI to: Dr Joe Greet, The University of Melbourne, greetj@unimelb.edu.au.

Apologies, this position is available to domestic applicants only.