

PhD position: The adaptive and regressive evolution of subterranean beetles

We are looking for an excellent PhD student to commence in 2019 on a project associated with an Australian Research Council Discovery grant: *Adaptation to life in the dark: genomic analyses of blind beetles*.

The candidate should have a strong interest in evolutionary biology (including the field of molecular evolution) and the natural history of subterranean animals. They will join a vibrant research team of Australian and international researchers, based at the University of Adelaide, that is focused on the diversity and evolution of Australian invertebrates.

The candidate will be supervised by Prof. Steven Cooper, Prof. Andy Austin and Dr Terry Bertozzi from the South Australian Museum, and will be based at the South Australian Regional Facility for Molecular Ecology and Evolution in the University of Adelaide. The team also includes Prof. Bill Humphreys from the Western Australian Museum.

Project summary:

This project utilises a unique Australian model system based on multiple, independently-evolved subterranean water beetles to explore the adaptive and regressive changes in the genome that occur when surface species colonise subterranean habitats. The project focuses on the evolution of Heat Shock protein (Hsp) genes that play critical roles in adaptation to environmental stress. Genomic analyses will be conducted to determine whether Hsp70 genes have regressed in subterranean beetle species that live in a highly stable thermal environment, compared to surface species. As part of this project, the candidate will develop skills in genomic DNA analyses, including next generation sequencing and the associated bioinformatics.

Application process:

Applicants should hold a first class honours degree or equivalent (e.g. MSc) and have experience in molecular genetic analyses (e.g. PCR amplifications and sequencing) and/or bioinformatics.

Applications or enquiries should be sent by email to Steve Cooper (steve.cooper@samuseum.sa.gov.au).

Australian students should first apply for an Australian Postgraduate Award scholarship in the [mid-year round](#) (due May 31st 2019) for commencement between July 1st and Nov 30th 2019. International students should first apply for a [University of Adelaide scholarship](#). The next round closes on Feb 15th for commencement between July 1st and August 31st. (or April 30th 2019 for commencement before 30th Nov 2019).

