

PhD opportunity – Centre for Ecosystem Science, University of New South Wales



UNSW
SYDNEY



Maximising establishment success in reintroduced populations



Photo credit: H McGregor

Supervisors: Dr Rebecca West (UNSW), Dr Katherine Moseby (UNSW), Dr Lee Ann Rollins (UNSW)

Institution: Centre for Ecosystem Science, School of Biological, Earth and Environmental Sciences, UNSW Sydney

The project:

A PhD opportunity is available for an independent and self - motivated postgraduate student with a 1st Class Honours degree in Biological Sciences.

The proposed project will examine interactions between reintroduced greater bilbies and their release environment to determine factors affecting establishment success in reintroduction, with a particular focus on maintenance of genetic diversity. Field work will be conducted at the Wild Deserts project in Sturt National Park, where a reintroduction of the greater bilby into two 20 km² predator exclosures is planned for mid-2019. The construction of two exclosures will allow for the experimental manipulation of release group origin and structure, enabling the successful candidate to examine factors such as post-release dispersal, survival, fecundity and dominance on the maintenance of genetic diversity. All released animals will be fitted with radio telemetry devices to enable the successful candidate to use a combination of tracking, genetic and behaviour studies to address key knowledge gaps in bilby reintroduction biology.

Background:

The Wild Deserts project is a collaboration between the Centre for Ecosystem Science, UNSW Sydney and ecological consultancy company, Ecological Horizons, in partnership with the NSW Office of Environment and Heritage. With funding through the NSW

Government Saving Our Species program, the Wild Deserts project aims to restore an area of Sturt National Park through the removal of feral pest species and the reintroduction of seven locally extinct mammal species (Pedler et al. 2018). Construction of two 20 km² feral proof fenced exclosures within the Strzelecki Dunefield system of the park is underway. Reintroductions will commence in 2019, with the first release of greater bilbies (*Macrotis lagotis*). The bilby was once widespread throughout arid and semi-arid areas of Australia but, due to habitat loss and introduced predators and herbivores, has been considered locally extinct in NSW for over 100 years.

Field work will be conducted at the Wild Deserts project in Sturt National Park, and so the successful candidate will need to spend considerable time there. Accommodation is available on site for field work. Laboratory work will be conducted at UNSW Sydney.

We are seeking self-motivated applicants with a demonstrated ability to work safely and independently in a remote field setting. Previous experience in animal handling, radio tracking, genetic analysis, grant writing, project management, and scientific writing are desirable but extensive experience is not essential.

This project will be supported by the Centre for Ecosystem Science (CES), School of Biological, Earth and Environmental Sciences (BEES) at the University of New South Wales (UNSW) Sydney. The successful applicant must enrol in a PhD programme at UNSW Sydney starting in Semester 1 in 2019 and will need to acquire an Australian Government Research Training Program (RTP) or equivalent award to take up the position. Funding for translocation costs, post-release monitoring via radio telemetry and some genetic analysis is already funded, but the successful applicant will be expected to apply for additional grants to assist travel and other research costs. Some funding is available to support international travel for presentation at conferences.

Please send a CV and a cover letter outlining your interest and suitability in the role to Dr Rebecca West (Rebecca.west@unsw.edu.au) by 24 August 2018. An interview process for selection of the successful candidate will be conducted shortly after, so that the successful applicant can submit an RTP application by 30 September 2018.

<https://www.ecosystem.unsw.edu.au/wilddeserts>

<https://www.facebook.com/WildDeserts/>

Pedler, R. D., West, R. S., Read, J. L., Moseby, K. E., Letnic, M., Keith, D. A., & Kingsford, R. T. (2018). Conservation challenges and benefits of multispecies reintroductions to a national park—a case study from New South Wales, Australia. *Pacific Conservation Biology*. <https://doi.org/10.1071/PC17058>