



PhD Scholarship – mechanics of species irruptions

Australia has the world's worst record of mammal extinctions, with many of the mid-range mammals impacted by exotic species, particularly foxes and cats. In arid ecosystems, the extinction of native mammals and loss of ecological services they provide have been accompanied by severe soil erosion and shifts in vegetation composition. However, there has been a rare re-emergence of a species far beyond its modern established range.

Fowlers Gap Arid Zone Research Zone in conjunction with the Centre for Ecosystem Science (CES) within the School of Biological Earth and Environmental Sciences (BEES), would like to offer a research grant to study the ecology *Pseudomys australis* (plains mouse) in Western NSW. The plains mouse was thought to be extinct in this NSW for over 70 years until its rediscovery at Fowlers Gap in 2015. Since this time 3 additional plains mice have been captured at Fowlers Gap and one further plains mouse caught in north-western NSW.

The PhD study will investigate the ecology of the plains mouse, origins of this irruption and reasons for the rapid expansion in populations. It will also examine the genetic links to other key populations in South Australia and Queensland.

We are seeking applicants with demonstrated ability to work independently in adverse environments and who must be highly self-motivated and detail oriented. The successful applicant will learn skills in small mammal trapping, experimental design, population genetics, remote fieldwork and statistical analysis. The study relates directly to UNSW's areas of research strength in "Water, Climate, Environment and Sustainability" and "Fundamental and Enabling Sciences", and will require the successful applicant to liaise with researchers and government officials in NSW and South Australia as well as work with the Centre for Ecosystem Science's "Wild Deserts project" in Sturt National Park.

The successful applicant will be required to have a First Class Honours Degree and to have applied successfully for a Research Training Program scholarship. A Fowlers Gap Scholarship to the value of \$10,000 p.a. will be available to the successful applicant to cover field work costs. The candidate must enrol in a PhD programme within the School of Biological Earth and Environmental Studies (BEES), University of New South Wales.

For additional information contact either Dr Keith Leggett (k.leggett@unsw.edu.au) or Associate Professor Mike Letnic (m.letnic@unsw.edu.au).