

## PhD or M Phil Positions in Biodiversity

A/Prof W Sherwin Evolution & Ecology Research Centre, BEES, UNSW, Sydney AUSTRALIA.  
<http://www.bees.unsw.edu.au/school/staff/sherwin/sherwinresearch.html>

*The projects centre on making forecasts for management of biodiversity.  
They are involved with developing new theory, testing on real data, and fieldwork.*

**Project 1: Forecasting demography of bottlenose dolphins** With partners from Murdoch University we are studying ecology, threats, and genetics of Bunbury (WA) bottlenose dolphins. The PhD student at UNSW will use these data in existing or novel programs, to evaluate population viability with different management and threats. There would be field-trips to Bunbury.

**Project 2: Forecasting and managing biodiversity.** We have used information theory to produce new biodiversity theory, (Molecular Ecology 15:2857). The PhD would apply this theory to a wide range of existing datasets in genetic and community biodiversity, using data from koalas, dolphins, flies, trees and various other species. The student would also be encouraged to further develop this theory in response to findings from the data analysis.

**Project 3: Resilience of small populations to periods of selection** A consortium of mathematicians and biologists at UNSW has produced new theory about the way that small endangered populations might rapidly recover their responsiveness to selection. This PhD position will follow up this theoretical work by carrying out experiments in model populations of flies. The project involves laboratory work. There could be an additional stipend supplement for this project.

**Project 4: Conservation of Little Penguins in New South Wales:** With Dr J Sinclair. To assess the viability of an endangered population of Little Penguins in Sydney Harbour under a range of threats and management strategies. The PhD student would conduct a molecular genetic and demographic analysis on NSW penguin populations, to input into a population forecasting model. The project involves some fieldwork and molecular laboratory work. There could be an additional stipend supplement for this project.

### PROCEDURE:

**(1) SKILLS:** Ecology (projects 1,2,4 especially) and genetics (projects 2,3,4 especially); computing or maths skills advantageous. Solid research and communication skills. Full NSW driver license desirable for project 4.

**(2) DISCUSS:** Email letter with CV, academic record, and details of two academic referees, to A/Prof Bill Sherwin (W.Sherwin@unsw.edu.au). For further information phone: 02-9385-2119.

**(3) PhD M/Phil CANDIDACY APPLICATION:** Requirements for PhD are BSc (Hons 1), MSc, or equivalent. For MPhil, requirement is BSc. Applications due end Oct. For exact timing and details see <http://www.grs.unsw.edu.au/>

**(4a) PhD SCHOLARSHIP APPLICATION:** Citizens or permanent residents of Australia/NZ, apply for APA and UPA at UNSW. Applications due end Oct, for study commencing in First Session in the following year. For exact timing and details see <http://www.grs.unsw.edu.au/scholarships/local.html>

**(4b) M Phil SCHOLARSHIP APPLICATION.** Students can apply for a \$4000 stipend form the EERC, UNSW. <http://www.eerc.unsw.edu.au/GradProgram.html>