

# PhD opportunity

## *Ecological modelling and monitoring*



### OVERVIEW

We are seeking applications from highly motivated and qualified candidates for a PhD program of research in the Quantitative and Applied Ecology Group (QAECO), School of BioSciences, University of Melbourne (Parkville). We are looking for students interested in conducting research on wildlife monitoring or species distribution modelling, particularly from a methodological angle. Work could involve understanding how existing modelling tools work, evaluating how they perform under different circumstances, and developing extensions and guidelines for their use. We are also interested in assessing the value of new technologies for collection of wildlife data. Examples of possible projects include research on abundance estimation methods for plant surveys, or on how to correctly use and evaluate the outputs of species distribution models. The student would also be encouraged to develop innovative lines of enquiry of their own. A successful candidate would ideally start early 2017, and will be co-supervised by Dr Gurutzeta Guillera-Arroita (<https://gguilleraresearch.wordpress.com>) and other QAECO principal investigators.

### ELIGIBILITY

Applicants must possess a Bachelor's degree with first-class Honours or a Master's degree in a relevant discipline. As the research will develop at the interface between ecology and statistics, desirable candidates include ecologists with skills in statistical modelling, as well as statisticians and mathematicians with strong interest in ecological applications. Experience programming in R, Matlab or equivalent will be an advantage, as is demonstrated ability to plan and conduct research independently. **The successful candidate must secure a scholarship through the University of Melbourne (APA or MRS),** which provides a tax-free annual stipend worth \$26,288.

### JOIN A DYNAMIC AND FRIENDLY GROUP!

At [QAECO](#), we are a diverse group sharing a passion for ecology and conservation, keen to develop, test and apply quantitative tools (maths and stats) to support environmental decisions and the study of natural systems. As an enthusiastic and involved student in QAECO, you will be provided with opportunities to develop your research program, including attending international conferences, visiting relevant research groups and obtaining support for fieldwork (if required).

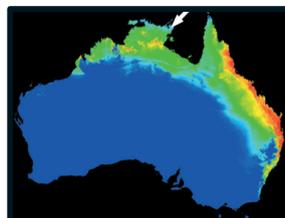
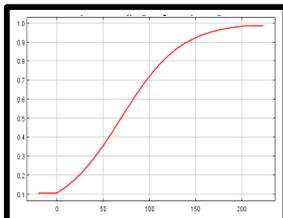
### HOW TO APPLY

Send a one-page statement outlining your research interests and ideas, together with a CV, academic transcript and contact details for 2 academic references to [gguillera@unimelb.edu.au](mailto:gguillera@unimelb.edu.au). Candidates should contact Guru to discuss details about this opportunity at least several weeks prior to deadline for applications. In 2016, the following deadlines apply:

*Scholarship deadlines:*

- 28 October 2016 (Australian or New Zealand citizens or Australian permanent residents)
- 30 September 2016 (international applicants)

Information about the scholarship application procedure can be found [here](#).



```
e <- list()
for (i in 1:k) {
  train <- rbind(pres[group.pres == i])
  test.p <- pres[group.pres == i]
  test.a <- abs[group.abs==i,]
  mymod <- glm(simps.presabs ~ test.p, data=test.a)
  e[[i]] <- evaluate(p=test.p, d=mymod)
}
```

