

Investigating the evolutionary forces underlying promiscuity in the Seychelles warbler (RICHARDSONS_U15SF): Norwich, United Kingdom

This PhD project is offered on a self-funding basis. It is open to applicants with funding or those applying to funding sources. Details of tuition fees can be found at <http://www.uea.ac.uk/pgresearch/pgrfees>

A bench fee is also payable on top of the tuition fee to cover specialist equipment or laboratory costs required for the research. The amount charged annually will vary considerably depending on the nature of the project and applicants should contact the primary supervisor for further information about the fee associated with the project.

Description

Promiscuity is common, even in supposedly monogamous species, yet the evolutionary forces acting on this behaviour are rarely quantified. This is important as promiscuity has widespread effects on key factors such as reproductive skew, gene flow and sexual selection. Studies are required to investigate the causes and consequences of individual variation in promiscuity to improve our understanding of why this is maintained. In most wild populations it is almost impossible to quantify the evolutionary dynamics of promiscuity accurately. Fortunately, because the Seychelles warbler population we study is confined to a small isolated island we can track individuals from birth to death and accurately determine survival and reproductive success. These measures, combined with the high rate of extra-pair paternity (EPP;40%) in a species that can live to 17-years and undergoes senescence, provide an exceptional opportunity to investigate individual variation in EPP and the associated costs and benefits. Furthermore, data from our long-term study shows that territory quality and local densities have varied over time in this population, altering the opportunities for EPP. The PhD will determine individual variation in EPP and correlate this with socio-ecological effects as well as age, health and other individual-specific parameters. They will then disentangle the genetic and environmental components of EPP variation using the Seychelles warbler pedigree and quantitative genetic techniques. This will provide novel insight into how both genes and environment influence the evolution of behaviour in natural systems. The student (based at UEA) will work within the Seychelles Warbler Project, a collaboration between evolutionary ecologists at UEA (UK), Groningen (NL) and Sheffield (UK), and undertake fieldwork in the Seychelles. They will be supervised primarily by Prof. DS Richardson and Dr H Dugdale, and trained in field work, evolutionary theory, experimental design, statistics, quantitative genetics and molecular techniques, though candidates with experience will be preferred.**Application deadline: 31-05-2015**

Additional Job Details

<https://www.uea.ac.uk/biological-sciences>