



Unfunded PhD: Genomic basis of extra-group paternity

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Indirect genetic benefits are hypothesised to drive the evolution of extra-group paternity (EGP), yet its genomic basis is unknown. This is important, as promiscuity has widespread impact on reproductive skew, gene flow, sexual and kin selection. Studies are required to elucidate the genomic basis of EGP, and the consequences of this, to determine how and why this variation is maintained.

Most studies of natural populations cannot measure the evolutionary dynamics of EGP accurately. However, as Seychelles warblers almost never leave their resident islands and are closely monitored, survival, lifetime reproductive fitness and EGP rates can be estimated accurately. Seychelles warblers have an unusually high rate of EGP (40%), which varies among individuals and has been linked to “good genes”. This provides a rare opportunity to determine the genomic basis of EGP.

This PhD will use large-scale representational sequencing analysis from across the genome, combined with a genetic pedigree of >1500 individuals and detailed residency data, to quantify variation and identify genomic regions contributing to EGP. The student will develop expertise in quantitative and evolutionary genetics, genomic analysis and statistical modelling.

We welcome applications from students with a background in Physics, Maths or Computer Science and an interest in evolutionary biology. Students with a biological background must demonstrate advanced quantitative skills such as programming, mathematics or statistics.

To apply: Email a letter of motivation, CV & details of two referees to the supervisors
Deadline: Applications will be processed as they are received.