

PROJECT TITLE: Social monitoring and manipulation of cooperative exchanges

Project Science Theme: Evolution and Biodiversity

Project keywords: Markets, Experiments, Fieldwork, Social-networks, Modelling

Lead Institution: Bristol

Lead Supervisor: Prof. Andy Radford, Bristol, Biological Sciences

Co-Supervisor: Professor Lauren Brent, Exeter, Psychology

Co-Supervisor: Dr Patrick Kennedy, Bristol, Biological Sciences

Project Enquiries: andy.radford@bristol.ac.uk

Webpage: https://www.bio.bris.ac.uk/research/behavior/Vocal_Communication/home.html

Project aims and methods:

Cooperation occurs throughout the natural world, with group members in many species trading the same or different cooperative behaviours in 'biological markets'. We have an increasing understanding of how and why individuals make these commodity trades, but they do not happen in isolation: groupmates constantly monitor the interactions of others. This project will investigate how such social information is gathered (both vocally and visually), how it affects individual behaviour and bonds among group members, and how individuals manipulate the relationships of others for their own benefit. To do this will entail using several decades of data from individually identifiable populations of wild South African mongooses and Puerto Rican macaques, field experiments on these tractable model systems to test causality, and mathematical modelling to make testable predictions. The project includes options for training and experience in experimental design and implementation (with Prof. Radford), social network analyses (with Prof. Brent), theoretical modelling (with Dr Kennedy) and sophisticated statistical methods (with all); the balance of components will be driven by the student's interests. The project will develop our understanding of cooperation, market trades and social evolution; given the clear parallels with human behaviour, it will also offer insight into our own ancestry.

Useful recruitment links:

For information relating to the research project please contact the lead Supervisor via:
andy.radford@bristol.ac.uk

Bristol NERC GW4+ DTP Prospectus:

<https://www.bristol.ac.uk/study/postgraduate/research/great-western-four-doctoral-training-partnership-nerc/>

How to apply to the University of Bristol:

<http://www.bristol.ac.uk/study/postgraduate/apply/>

The application deadline is Thursday 8 January 2026 at 2359 GMT