PROJECT TITLE: Behavioural processes underpinning prosocial behaviour in toothed whales

Project Science Theme: Evolution and Biodiversity Through Space and Time
Project keywords: cooperation, delphinids, communication, sociality, behaviour.

Lead Institution: University of Bristol
Lead Supervisor: Stephanie King, University of Bristol, School of Biological Sciences
Co-Supervisor: Darren Croft, University of Exeter, School of Psychology

Project Enquiries: stephanie.king@bristol.ac.uk
Webpage: www.cetaceancommcog.com

Project aims and methods:

In many animal societies, related and unrelated individuals form social bonds and cooperate. A large body of theory on the evolution of cooperation exists, but the behavioural mechanisms that mediate cooperation in animal societies remains a gap in our understanding. In toothed whales, cooperative relationships can take the form of matrilineal family groups to long-term alliances among unrelated males. Using data from two multi-decadal studies on bottlenose dolphins and killer whales, alongside state-of-the-art technology such as drone-mounted video and underwater microphone arrays, the student will co-develop a project to quantify the physical and acoustic behavioural processes used by individuals as they engage in prosocial behaviour. Behavioural interaction and acoustic data will be used to test how physical and vocal processes are used to initiate joint action, promote social bonding, and facilitate individual and group fission-fusion events. These behaviours will be mapped onto an individual's social network and fitness measures. This research will uncover how individual variation in behaviour pays dividends in terms of connections within and between cooperative groups and participation in cooperative tasks, and the behavioural processes used to maintain long-term cooperative relationships. The project will provide training in animal behaviour, practical field experiments, and advanced statistical methods.

Useful recruitment links:

For information relating to the research project please contact the lead Supervisor via: stephanie.king@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 Monday 13 January 2025 at 2359 GMT.