

PROJECT TITLE: Animal personality, social interactions and invasive species

Project Science Theme: Evolution and Biodiversity

Project keywords: conservation, ecology, behaviour, fish, tropical

Lead Institution: Bristol

Lead Supervisor: Prof. Christos Ioannou, Bristol, School of Biological Sciences

Co-Supervisor: Dr Amy Deacon, University of the West Indies, The Department of Life Sciences

Co-Supervisor: Dr Sasha Dall, University of Exeter, Centre for Ecology & Conservation

Co-Supervisor: Prof. Martin Genner, University of Bristol, School of Biological Sciences

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Project aims and methods:

How are some animals able to survive and breed in a novel habitat? This is a key question in the study of invasive species, but also for restocking programmes in conservation. The number of founder individuals (a.k.a. propagule pressure) increases the chance of establishment. This project will use the guppy (*Poecilia reticulata*), a globally invasive fish, in experiments conducted in Trinidad and simulation modelling to, for the first time, reveal the mechanisms for why the number of founder individuals increases the chance of populations establishing in novel environments, with a focus on behavioural inter-individual variation (animal personality) and social interactions.

The project will suit a student interested in the interface between conservation, ecology and animal behaviour. They will help set the overall research direction, specific research questions, and the balance between empirical and modelling studies. The supervisory team will provide diverse, comprehensive and complementary training in mesocosm experiments (Deacon), extracting behavioural data from video and advanced statistical methods in R (Ioannou), simulation modelling (Dall) and fish ecology and conservation (Genner). Mesocosm experiments in Trinidad, a tropical Caribbean island, will involve visits of several months. We encourage applications from under-represented groups and/or disadvantaged backgrounds, and value a diverse research environment.

Useful recruitment links:

For information relating to the research project please contact the lead Supervisor via:
C.C.ioannou@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