

Darwin Fellowship - Interim Report

Due within one month of the half way point of your Fellowship (*maximum 3 pages*)

Darwin Fellowship reference	DPLUS 217
Name of Darwin Fellow	Lillianne Hawkins
Lead organisation (Project Leader)	University of Gibraltar and Prof Julia E. Fa
Fellow's organisation(s)	University of Gibraltar
Fellow's role within the organisation (prior to Fellowship)	Darwin Plus Local Project Assistant
Start/end date of Fellowship	1 June 2024 – 31 May 2026
Location of Fellowship	Gibraltar
Darwin Fellowship grant value (£)	99,387
Type of work (e.g. research, training, if other please specify)	Training and research to develop a computerised database
Main contact in lead organisation	[REDACTED]
Author(s) and date	Lillianne Hawkins, May 2025

1. Background

I was a 'Darwin Plus Project Assistant' for a Darwin Plus Local project titled 'Evaluating an important biodiversity area in Gibraltar: Windmill Hill Flats' (DPL00044). In this role I worked closely with the Project Lead, Prof Julia E. Fa. I coordinated with local experts and stakeholders, and their contributions to the project (including the Department of Environment and local NGOs). I carried out literature searches, compiled existing data for the site and outlined methods. I was also responsible for acquiring and maintaining equipment and arranging access to the MOD site. The project was completed in April 2024.

This fellowship will promote the scientific management of Gibraltar's Barbary macaque (*Macaca sylvanus*) population by facilitating a thorough census of resident monkeys, investigating human-macaque conflict mitigation strategies, and establishing a robust computerised animal records database. This resource will underpin research and policymaking, fostering the species' long-term conservation in Gibraltar.

As the Fellow's employing institution, the University of Gibraltar (UoG) plays a key operational and academic role in the DPLUS217 fellowship project. UoG provides the institutional framework and resources needed for the delivery of the project, including logistical support, research infrastructure, and administrative coordination.

UoG hosts the Fellow and facilitates her supervision by Project Lead Professor Julia E. Fa. UoG also supports the Fellow's professional development by enabling her to enrol in a relevant postgraduate programme alongside her project responsibilities.

By embedding the fellowship within its broader conservation initiatives, UoG ensures that the project builds on existing research while enhancing its contribution to the protection and restoration of Gibraltar's unique natural environment.

2. Progress

Output 1) Logistics and preparation

- Completed research proposal and ethics form. Received ethical approval (from UoG) and research license from the Department of Environment, Sustainability, Climate Change and Heritage (DESCCH). (1.2, 1.3)

Output 2) Gathering and collating information from observations

- Good progress made with profiles for 4 of 9 troops. (2.1, 2.2, 2.3, 2.4, 2.5)

Output 3) Database purchase, establishment and input flow

- Data entry templates created through 'CyberTracker' projects and app. (1.1, 3.3, 3.3)
- Purchased and utilised camera equipment for field work. This provides excellent images for the identification of individuals and as profile images.
- Collaborated with Ms Bethany Gadd (PhD student, University of Gibraltar) and Dr Sylvain Lemoine (University of Cambridge), in partnership with Dr Tilo Burghart from the Department of Computer Science at the University of Bristol, to develop AI-driven software for individual macaque recognition.

Output 4) Fellow's personal capacity and capability building

- Primatology and conservation online course started. (4.1)
- Fellow has accepted unconditional offer to study MSc in Environmental Science and Climate Change at the University of Gibraltar. Course starts September 2025. (4.4)

Output 5) Capacity building

- Regular meetings and correspondence with the CEO of DESCCH, Mr Stephen Warr, the Minister for Environment, Minister John Cortes, and local vet Mark Pizarro to ensure the requirements of these stakeholders can be outlined in the database.
- Collaboration with Macaque Management team. (5.1)
- Fellow presented to Minister for Environment John Cortes, CEO of DESCCH Stephen Warr, local expert Keith Bensusan, and local vet Mark Pizarro. (5.1, 5.3)

Output 6) Outreach

- World Wildlife Day event hosted by the Gibraltar National Museum (April 2025). Fellow displayed a poster in collaboration with Bethany Gadd and produced handouts which included a Gibraltar wildlife-themed word search and Barbary macaque colouring pages. (6.1, 6.2)
- Filmed segment for local TV series for Research That Benefits Gibraltar (RTBG) conference. May 2025 (6.2)

Chester Zoo is unable to host the Fellow due to a lack of time and resources. However, we have met with Chester Zoo's Lead Conservation Scientist, Dr Katie Edwards and Trentham Monkey Forest's Park Director, Matt Lovatt, online. We are collaborating with Dr Edwards on a complementary University of Gibraltar-funded project. This project compares stress hormone levels in macaque troops with high visitor interactions vs. low visitor interactions in Gibraltar.

I plan to visit and meet with Matt Lovatt in person at Trentham Monkey Forest in early September 2025.

3. Achievements and Outcomes

I was invited to present and discuss the Fellowship Projects objectives and work with Minister for Environment Min. John Cortes, CEO of DESCCH, Mr Stephen Warr, local expert, Keith Bensusan, and local vet Mark Pizarro, who manages the Macaque Management team.

During this meeting, Min Cortes inquired about the feasibility of GPS collaring to obtain robust information regarding macaque troop movement. We raised concerns regarding expenses, and Min. Cortes expressed a willingness to support the project with funding if feasible.

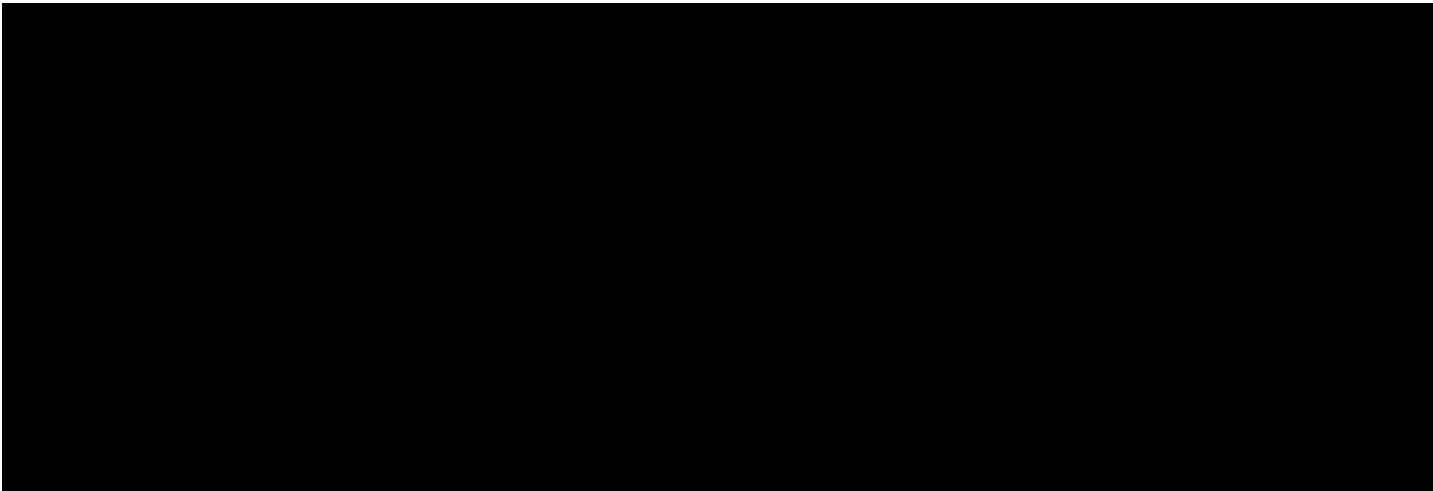
This allowed us to verbally provide a formal report to DESCCH and improve the government's awareness and understanding of the project and its objectives. It also opened the channel for us to communicate directly with the key players and disseminate what we learn and gain from the project.

I am also progressing with the macaque individual profiles, which will serve as an accessible handout for Macaque Management. This will be alongside a CyberTracker App 'project' that will engage the team in a Citizen Science-style data collection strategy.

4. Impact of COVID-19 on Fellowship

N/A

5. Safeguarding



6. Next Steps

1. Complete census estimate. June 2025 (2.0)
2. Present poster at Research That Benefits Gibraltar Conference (RTBG) hosted by the University of Gibraltar. June 2025 (6.1 to public).
3. Public Lecture by Prof. Julia E. Fa at RTBG. June 2025 (6.3)
4. Deploy CyberTracker Projects to Macaque Management team. June 2025 (5.1, 5.2)
5. Complete macaque profiles for all troops. September 2025 (2.0)
6. Visit Chester Zoo and meet with Park Director of Trentham Monkey Forest. September 2025 (4.2, 4.3)
7. Enrol on MSc in Environmental Science and Climate Change at the University of Gibraltar. September 2025 (4.4, 4.5)
8. World Wildlife Day 2026. April 2026 (6.1)
9. Deploy and monitor GPS collars. November 2025 – May 2026 (3.0)
10. RTBG 2026 (June 2026 tbc.) (6.1)

The following is an extract from our outcome letter: 'You should acknowledge and respond to this feedback either in your response to this letter or in your first Annual Report:

- *provide further information on how the engagement with local-stakeholders, e.g. local government, will be undertaken, including outlining which key player and decision-makers will use the data to deliver biodiversity outcomes;*

To ensure engagement with local stakeholders and our local government we have been having regular meetings and correspondence with CEO of Department of Environment, Sustainability and Climate Change, DESCCH, Stephen Warr and local vet and Macaque Management manager Mark Pizarro.

We were invited to present and discuss the Fellowships objectives and work with Minister for Environment, Min. John Cortes, CEO of DESCCH, Mr Stephen Warr and local expert Keith Bensusan, and local vet Mark Pizarro. We are also collaborating directly with the Macaque Management team which consists of 'Ape keepers' and 'Conservation Assistants'. All listed above are key players and decision-makers who will use the data collected during the Fellowship to inform their management choices and how they action them.