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# **DPR12F\1013**

## **Lillianne Hawkins**

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.

## PRIMARY APPLICANT DETAILS

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Name Research  
Surname Office  
Website [REDACTED]  
Tel (Work) [REDACTED]  
Email (Work) [REDACTED]  
Address [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

## CONTACT DETAILS

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Title Prof  
Name Julia  
Surname Fa  
Organisation [REDACTED]  
Tel [REDACTED]  
Email [REDACTED]  
Address [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

# DPR12F\1013

Lillianne Hawkins

## Section 1 - Contact Details

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### PRIMARY APPLICANT DETAILS

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<b>Name</b>		Research
<b>Surname</b>		Office
<b>Website</b>	h	[REDACTED]
<b>Tel (Work)</b>		[REDACTED]
<b>Email (Work)</b>		[REDACTED]
<b>Address</b>		[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]

### CONTACT DETAILS

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<b>Title</b>		Prof
<b>Name</b>		Julia
<b>Surname</b>		Fa
<b>Organisation</b>		[REDACTED]
<b>Tel</b>		[REDACTED]
<b>Email</b>		[REDACTED]
<b>Address</b>		[REDACTED]
		[REDACTED]
		[REDACTED]
		[REDACTED]

### GMS ORGANISATION

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

Type	Organisation
<b>Name</b>	University of Gibraltar
<b>Phone (Work)</b>	[REDACTED]
<b>Email (Work)</b>	[REDACTED]
<b>Website (Work)</b>	[REDACTED]
<b>Address</b>	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]

## Section 2 - Title, Dates & Budget Summary

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Please attach a cover letter as a PDF document.

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 [DPR12F1013 CoverLetter\\_JF](#)  
 02/10/2023  
 18:39:16  
 pdf 365.46 KB

### Q3a. Is this a resubmission of a previously unsuccessful application to Darwin Plus Fellowships?

No

### Q4. Name and official address of proposed Darwin Plus Fellow

Include email details where available.

<b>Name</b>	Lillianne Hawkins
<b>Address</b>	University of Gibraltar, Europa Point Campus, GX11 1AA
<b>Email Address</b>	<a href="mailto:lillianne.hawkins@unigib.edu.gi">lillianne.hawkins@unigib.edu.gi</a>

### Q5. Summary of proposed Fellowship i.e. Outcome

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.

### Q6. UKOT involved

#### Q6a. Please state which UKOT(s) will be involved with the Fellowship?





Gibraltar

#### Q6b. Have you included a letter of support from the relevant OT Government(s) and/or OT-based civil society organisation?

Yes

Please provide a combined PDF of all letters of support

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 [DPLF Lettersofsupport](#)  
 02/10/2023  
 18:57:48  
 pdf 447.59 KB

### Q7. Project dates

Start date:  
01 May 2024


End date:  
30 April 2026

**Duration (e.g. 1 year, 2 months):**  
24 months

## Q8. Budget summary

	2024/2025	2025/2026	2026/27	Total
Darwin funding request (Apr - Mar)				£

Please complete the template below which provides the Budget for this application.

 [DPLF Budget V3](#)  
 02/10/2023  
 17:58:49  
 xlsx 151.29 KB

## Section 3 - Principals

### Q9. Principals in the Fellowship


Please give the details of the individuals from the applicant and host organisations (and other institutions if relevant) who would be directly involved in supervising/ working with the Darwin Plus Fellow.


Details	Project Leader	Other Expert	Other Expert	Other Expert
<b>Surname</b>	Fa	Gadd	Pizarro	Lemoine
<b>Forename(s)</b>	Julia E.	Bethany	Mark	Sylvain
<b>Post held</b>	Research Fellow/Project Leader	Associate Lecturer / MSc Environmental Science and Climate Change	Owner and Chief Veterinarian & Head of the Macaque Management Team	Assistant Professor in Primatology
<b>Organisation</b>	University of Gibraltar	University of Gibraltar	Gibraltar Veterinary Clinic	University of Cambridge
<b>Email</b>	Julia.Fa@unigib.edu.gi	Bethany.Gadd@unigib.edu.gi	mark@gibvet.com	sl2079@cam.ac.uk


Do you require more fields?


No

**Please provide a one page CV for each of these named individuals, including the Fellow named at Question 4, uploaded as one PDF.**

 [DPR12F1013 CVs](#)

 02/10/2023

 17:11:56

 pdf 1.44 MB

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## **Section 4 - Aims, Activities & Achievements**

### **Q10. Describe briefly the aims, activities and achievements of the proposed Fellow's employing organisation.**

The University of Gibraltar (UoG) is dedicated to meeting societal needs, fostering personal and professional growth through education, training, and research. Central to its mission are partnerships with local and global entities: businesses, government bodies, charitable foundations, healthcare providers, and educational institutions.

The UoG also supports conservation projects that contribute to the protection of the local natural environment. The University is currently leading two Darwin Plus Local awards, including DPL00044, focused on assessing biodiversity in Windmill Hill Flats, and DPL00057, centred around oyster restoration in British Gibraltar Territorial Waters.

Lillianne will collaborate with Prof Julia E. Fa, with whom she works on DPL00044, coordinating environmental surveys for habitat restoration and wildlife management. Lillianne will be employed by the UoG, enabling her to extend her 10-month contract. This employment will involve fulfilling the fellowship requirements and the opportunity to enrol on a Master's programme, to further her studies.

### **Q11. Describe briefly the proposed Fellow's current role within their organisation and what relevance this has to one or more of the main themes of Darwin Plus.**

Lillianne's current position in project DPL000444 is closely aligned with the core themes of the Darwin Plus:

**Biodiversity:** Lillianne currently coordinates field activities in this project. Its primary objective is to formulate management strategies and sustainable approaches for the long-term protection of important biodiversity areas in Gibraltar. This project will generate management plans that guide the protection of plants and animals unique to the target areas as well as mitigate the adverse effects of invasive species and uncontrolled anthropogenic threats and examine the potential for reintroducing lost species.

**Capability and Capacity Building:** Lillianne is also responsible for the development of local expertise by training environmental and conservation officers in survey techniques. She also facilitates collaborations with all local stakeholders and, with the backing of the project leader and host institution, explores opportunities for environmental education at the community level. This includes involving local schools in fieldwork and promoting research projects in partnership with the UoG. She has fostered valuable working relationships with key local organisations and individuals, some of whom are affiliated with DESCCH. Her prior experience collaborating with Mr. Mark Pizarro on macaque management also equips her to achieve immediate progress in this fellowship.

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## **Section 5 - Outcomes & Objectives**

### **Q12. Provide a concept note on the Fellowship. This should include:**

## Q12a. A clear outline of the aim and objectives of the Fellowship

The main aim of the fellowship is to address critical gaps in information on the Barbary macaque population in Gibraltar.

Its objectives are:

### 1. Census all animals in the current macaque population

- Employing non-invasive, cost-effective data collection methods to document all monkeys in each troop, creating an extensive library of photographs and descriptions for each resident animal.

### 2. Improving information by establishing a comprehensive computerised database, incorporating baseline records, for managing Gibraltar's macaque population

This will be achieved by:

- Defining the database's scope and structure.
- Collaborating with experts experienced in database management.
- Collating existing data and implementing new data entry procedures for:
  - I. Individual Identification Data: Including unique identifiers, physical characteristics, and genetic information;
  - II. Demographic Information: Age, birth date, gender, troop affiliation, and parentage;
  - III. Health and Medical Records: Health assessments, vaccination history, veterinary records, post-mortems (including cause of death);
  - IV. Data Sources and References: Document data sources, including research studies, field reports, and past monitoring programmes;
  - V. User Access and Security: Determine user access controls, alongside robust backup and data recovery procedures.

### 3. Evaluate human-macaque conflict:

Human-barbary macaque conflict in Gibraltar revolves around feeding, property damage, tourism impact, territorial behaviour, associated with managing the monkeys within a highly human populated territory. Data on these issues will be gathered on documented conflicts between residents, tourists, and macaques by:

- I. Compiling data on tourist bite incidents from Gibraltar General Hospital records;
- II. Documenting incidents of macaques entering properties or causing damage based on Gibraltar police reports;
- III. Assessing troop home ranges, movement patterns, and their overlap with residential areas;
- IV. Evaluating the effectiveness of existing methods aimed at discouraging macaques from venturing into human-populated areas.

### 4. Foster support within the local community through outreach initiatives to improve awareness and understanding

## Q12b. The role of the applicant and/or host organisation, and others where relevant

The applicant, Prof Julia Fa, offers experience from previous Darwin projects which will feed into Lillianne Hawkin's fellowship. She will act as main advisor and point of contact throughout. Julia's expertise enables her to offer comprehensive guidance and support to Lillianne, as well as facilitating close collaboration with DESCCH and the valuable assistance of local experts such as Veterinarian Mark Pizarro (Head of the Macaque Management team) and Ms. Bethany Gadd (PhD Researcher and Associate Lecturer for the MSc Environmental Science and Climate Change Programme at the University of Gibraltar). Dr Sylvain Lemoine will assist in complementing the population monitoring and data collection through the Gibraltar Macaques Project, hosted by the University of Cambridge.

The host organisation, the UoG, will serve as the lead partner for this fellowship. Facilitating the development of local capabilities and capacity, ensuring that Lillianne acquires the necessary skills, knowledge, and resources to address local environmental challenges. The University will also support her in engaging with local stakeholders

through a public outreach campaign. Importantly, this project aligns seamlessly with the University's MSc in Environmental Science and Climate Change and will therefore enable the participation of students in monitoring projects.

Under the UoG and DESCCH, Lillianne will be responsible for conducting fieldwork and desk work in line with the objectives of this fellowship. The DESCCH will host and ensure the maintenance of the macaque database and guide the application of conservation protocols via the Macaque Management team. To promote accessibility and transparency, the database will be subject to discussion with DESCCH and stakeholders, serving as a crucial resource for informing enforcement frameworks to maintain the health of macaque troops.

**Q12c. Where appropriate, how the Fellowship will contribute towards one or more of the four themes of Darwin Plus in the OTs i.e. what the expected outcome of the Fellowship will be.**

This relevant and necessary fellowship contributes primarily to two of the Darwin Plus themes:

**Capability and capacity building:** This fellowship application is the first known to be submitted by a Gibraltar British national, from an organisation in Gibraltar, for a Gibraltar-based project. The fellowship will provide training opportunities for Lillianne, including visits to reference centres in the UK (Trentham Monkey Forest) and London Zoo. These visits will allow Lillianne to learn from experts, enhancing her knowledge and understanding of monitoring and managing macaques.

Lillianne will disseminate knowledge gained through a formal report for DESCCH, and a presentation with accessible handouts for the Macaque Management team. Additionally, Lillianne will apply this knowledge to develop a fit-for-purpose database and additional training to keep the Macaque Management Team up to date on the new knowledge gained. Lillianne will provide seminars for schools at the Tovey Cottage Natural History Field Centre for environmental education, engaging local stakeholders and providing a framework to give feedback to the community.

**Biodiversity:** The outcome of the fellowship will be a database of the Gibraltar macaque population, to inform conservation and management policies on an iconic species for Gibraltar, to ensure its continuation as a sustainable tourist attraction. The information gathered and the database created during this fellowship will provide a robust baseline for which future information gathered can be compared, subsequently informing HM Government and influencing policies and directives. It shall also be shared with the International Primatological Society (IPS) and Primate Society of Great Britain (PSGB) to begin a current and continued synergy.

## **Section 6 - Legacy & Collaboration**

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### **Q13. Legacy**

**Provide information on how the Fellow will utilise, promote and disseminate the benefits of the Fellowship. Will a strategy be developed during the Fellowship to ensure this is achieved?**

The Macaque database will facilitate the identification of individuals, improving the conservation and management strategies of troops, and ensuring their long-term well-being. Developed during the fellowship, the monitoring programmes will integrate into the broader macaque monitoring effort, facilitated by close collaboration with the Macaque Management team.

The UoG, with the continued collaboration with DESCCH, will provide sustained support with the MSc Environmental Science students contributing to the database. Following this fellowship Lillianne plans to continue to work on the database, ensuring it remains current and relevant.

Lillianne will benefit from training trips, sharing gained knowledge through outreach seminars at the University



and educational talks to school groups at Tovey Cottage. The project's results will be disseminated through peer-reviewed publications and articles intended for a broader audience.

The UoG's marketing team, after consultation with DESCCH, will oversee the project's communication efforts, producing various communication outputs aimed at garnering community support, including two articles for the local newspaper, The Gibraltar Chronicle, segments for broadcasting on the local TV channel, social media posts, and posters to distribute within the Upper Rock section of the Gibraltar Nature Reserve.

## Q14. Priorities

**How will the Fellowship assist the OT's environmental priorities? Please refer to international or national environmental conventions, treaties, agreements, strategies and/or action plans relevant to the OT as appropriate.**

The project supports:

- (1) The Gibraltar Biodiversity Action Plan, Section 3: Provision of long-term protection for species and habitats, including the Upper Rock as terrestrial nature reserve.
- (2) The Gibraltar Nature Reserve (GNR) Management Plan, which places emphasis on fauna found nowhere else in Europe: the Barbary macaque.
- (3) The Barbary Macaque Action and Management Plan, which includes, among others: Monitoring of the population; Improving communication to the public; Maximising the use of the macaques as an educational resource.
- (4) Upper Rock Management and Action Plan, Section 14 which outlines macaque population control methods such as relocation, contraception and routine management to prevent inbreeding problems and favour healthy genetic variability.

Internationally:

- (5) Convention on Biological Diversity (CBD), Article 8(d): Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings; Article 8(i): Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components.
- (6) Bern Convention, Article 2: Maintain the population of wild fauna at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements.

## Q15. Collaboration

**What collaboration has there been with the proposed Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within their own territory.**

This proposal has been drafted collaboratively by Lillianne Hawkins, the Project Lead Prof Julia Fa and the University of Gibraltar. Lillianne has consulted the DESCCH at the preparation stage of this project to obtain the relevant site access and work permits. Collaboration is planned with the following experts:

- Mr Mark Pizarro, Chief Veterinarian, Gibraltar Veterinary Clinic. Mark is contracted by the DESCCH as Head of

the Macaque Management Team.

- Ms Bethany Gadd, lecturer at the UoG is currently working on her PhD on complementary topics of the biology and behaviour of the Gibraltar macaques.
- Dr Sylvain Lemoine, University of Cambridge, will assist the Fellow in identifying individual monkeys, profiling and monitoring; in gathering behavioural and human-macaque interaction data. The baseline information gathered within this fellowship will also support the research objectives of Dr Lemoine's Gibraltar Macaques Project.

Lillianne has engaged with the two-times Darwin fellow Jakovos Demetriou, who visited Gibraltar in 2023 for a Darwin Plus project on invasive species, led by Prof Helen Roy (UK Centre for Ecology & Hydrology).

## Q16. Where will the Fellow be based?

**Please be specific with organisational details and dates (where more than one location).**

Lillianne will implement her fellowship programme in Gibraltar.

For computer-based work and statistical analyses she will be based at the University of Gibraltar, where she has an office space for the DPL00044 project. Fieldwork will be carried out at the Gibraltar Upper Rock Nature Reserve, in collaboration with the Macaque Management team from DESCCH.

Tovey Cottage, an educational resource from DESCCH located at the Nature Reserve, will be used to deliver talks for schools, an activity where the fellow has relevant experience. The John Mackintosh Hall (JMH), an exhibition venue located in the centre of town, will be used for wider community outreach activities. Existing MoUs (Memorandum of Understanding, formal agreements) guarantee the use of the Tovey Cottage and JMH spaces at no extra costs.


During this fellowship, Lillianne will visit a UK zoo and the Trentham Monkey Forest (<https://monkey-forest.com>) to learn record-keeping procedures used by these organisations that could be implemented in the Gibraltar context.


## Section 7 - Workplan


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### Q17. Workplan

**Provide a project workplan that shows the key milestones in project activities.**

 [DPR12F1013 Workplan V1](#)

 02/10/2023

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## Section 8 - Certification

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### Certification

**On behalf of the**

Company

of

The University of Gibraltar

**I apply for a grant of**





£99,387.00

**I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.**

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I enclose one page CVs for project principals, cover letter, budget, workplan, and letters of support as requested in the Guidance Notes.

Checked

<b>Name</b>	Dr Darren Fa
<b>Position in Organisation</b>	Director of Academic Programmes and Research
<b>Signed</b>	 <a href="#">DF Signature</a>  02/10/2023  17:27:56  pdf 181.22 KB
<b>Dated</b>	02 October 2023

## Section 9 - Submission Checklist

<b>I have read the</b> Guidance documents, including the "Guidance Notes for Applicants" and "Finance Guidance".	Checked
<b>I have read, and can meet, the current</b> Terms and Conditions <b>for this fund.</b>	Checked
<b>I have provided</b> actual start and end dates <b>for my project.</b>	Checked
<b>I have provided a budget based on UK government financial years i.e. 1 April – 31 March and in GBP.</b>	Checked
<b>The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).</b>	Checked
<b>I have provided the relevant letters of support, cover letter, workplan, and CVs with this application.</b>	Checked
<b>My additional supporting evidence is in line with the requested evidence, amounts to a maximum of 5 sides of A4, and is combined as a single PDF.</b>	Checked

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<b>(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form</b>	Checked
<b>I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.</b>	Checked
I have read and understood the Privacy Notice on the Darwin Plus website.	Checked

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### **We would like to keep in touch!**

**Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative, Darwin Plus and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.**

Checked

### **Data protection and use of personal data**

Information supplied in the application form, including personal data, will be used by Defra as set out in the Privacy Notice, available from the [Forms and Guidance Portal](#).

This **Privacy Notice** must be provided to all individuals whose personal data is supplied in the application form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).

Project Title: Lillianne Hawkins  
 Darwin Plus Round 12: Fellowship  
 DPR12F\1013

**Guidance – please delete before submitting**

Provide a **Workplan** that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project. Quarters are based on UK FYs (**1 April – 31 March** - Q1 therefore starts April 2024).

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the quarters in which an activity will be carried out. The activity numbers should correspond to the activities in your logical framework (logframe). The workplan can span multiple pages if necessary.

This template covers multiple Biodiversity Challenge Funds schemes, so ensure you check the eligible dates/project length for the scheme you are applying to and feel free to delete later years if not applicable for your project.

	Activity	No. of months	Year 1 (24/25)				Year 2 (25/26)				Year 3 (26/27)
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<b>Output 1</b>	<b>Logistics and preparation.</b>										
1.1	Design database framework outline based on the requirements of the stakeholders and the categories of data will be collected.	4									
1.2	Write a research proposal for a research licence.	2									
1.3	Acquire a research licence.	2									
<b>Output 2</b>	<b>Gathering and collating information from observations</b>										
2.1	Compile and assess existing data. Digitise if and where needed in preparation for collating into the database.	4									
2.2	Observations of Troop 1	1									
2.3	Observations of Troop 2	1									
2.4	Observations of Troop 3	1									

Project Title: Lillianne Hawkins  
 Darwin Plus Round 12: Fellowship  
 DPR12F\1013

	Activity	No. of months	Year 1 (24/25)				Year 2 (25/26)				Year 3 (26/27)
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
2.5	Observations of Troop 4	1									
2.6	Observations of Troop 5	1									
2.7	Observations of Troop 6	1									
2.8	Observations of Troop 7	1									
2.9	Observations of Troop 8	1									
2.10	Observations of Troop 9	1									
<b>Output 3</b>	<b>Database purchase, establishment and input flow.</b>										
3.1	Database software purchase	1									
3.2	Create a data entry template.										
3.2	Input data into database.	9									
3.3	Establish process flow for submission and approval to database via manual data verification.	3									
<b>Output 4</b>	<b>Fellow's personal capability and capacity building.</b>										
4.1	Primatology and conservation online course.	1									
4.2	Visit London or Chester Zoo.	1									
4.3	Visit Trentham Monkey Forest, UK.	1									
4.4	Masters enrollment.	1									
4.5	Masters course	20									
<b>Output 5</b>	<b>Capacity building.</b>										

Project Title: Lillianne Hawkins  
 Darwin Plus Round 12: Fellowship  
 DPR12F\1013

	Activity	No. of months	Year 1 (24/25)				Year 2 (25/26)				Year 3 (26/27)
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
5.1	Two presentations to the Macaque Management team.	2									
5.2	Two training materials in the form of accessible handouts for the Macaque Management team.	2									
5.3	Two formal reports to DESCCH following visits to Trentham Monkey Forest and London Zoo.	2									
<b>Output 6</b>	<b>Outreach</b>	1									
6.1	Presentations to school groups at Tovey Cottage Field Centre	1									
6.2	Media outputs (2 news items, 1 segment for local TV, social media posts, at least 2 posters).	6									
6.3	Public lecture by one of the collaborating experts.	1									
6.4	Seminar at University of Gibraltar.	1									