

## Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus Half Year Report

*Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.*

**Submission Deadline: 31<sup>st</sup> October 2023**

<b>Project reference</b>	DPLUS165
<b>Project title</b>	Barcoding an Island: expanding genetic biomonitoring on Ascension
<b>Country(ies)/territory(ies)</b>	Ascension Island
<b>Lead partner</b>	Ascension Island Government
<b>Partner(s)</b>	University of Edinburgh, Natural History Museum
<b>Project leader</b>	<i>Tiffany Simpson</i>
<b>Report date and number (e.g. HYR1)</b>	<i>HYR2</i>
<b>Project website/blog/social media</b>	<i>n/a</i>

**Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).**

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.

From April 2023 to Sept 2023 there has been significant progress across multiple outputs.

**1.1 Locate all verified invertebrate specimens from past and current studies and obtain tissue sample from each.**

**Progress – behind schedule** – this was due to be completed by September 2023 but unfortunately locating samples and getting all relevant information has been difficult. Due to samples being taken in Ascension’s waters but stored off island, project staff have to wait for collaborators to either send samples to Ascension or NHM.

**1.2 Genetic sample identification number added to Ascension Biodiversity database.**

**Progress – behind schedule** – due to issues mentioned in 1.1 some samples still do not have a genetic sample identification number as they have yet to be located.

**1.3 Barcoding or full sequencing of all samples collated in activity 1.1 by NHM or commercial laboratory. Protocols will follow those required for inclusion within the Darwin Tree of Life database.**

**Progress – on schedule** – Samples from settlement plates have been transported to NHM for barcoding and identification. This should be completed on schedule by March 2024.

## **2.1 Write and test protocols for DNA extraction and metabarcoding**

**COMPLETED** – all protocols have been written and tested.

## **2.2 Create training reference documents and deliver practical training course in DNA extraction and metabarcoding for ten members of AIGCFD.**

**Progress – on schedule** – Reference documents and protocols for staff to follow have been completed. Training has begun with key members of staff to ensure the longevity of DNA barcoding on Ascension. Staff should be trained by Dec 2023 but may not have had practical experience of some aspects of protocols due to reagent supply issues. Hands on practical training will be given before the end of the project.

## **3.1 AIGCFD staff collect monthly samples from 3 pitfall traps, 2 malaise traps, 3 inshore settlement panels and 2 light traps over six month period and preserve samples in ethanol.**

**Progress – on schedule** – Slight changes have been made to sampling strategy and methods to ensure safety of staff. Light trapping is no longer a viable option on Ascension due to strong swells and destruction of sampling equipment – the project lead and officer have decided to gather samples from plankton tows which should provide the same information as a light trapping sample. Work on this output began early and as such there are already >6 months of plankton and settlement panel samples. Pitfall traps and malaise trap sample gathering has begun and will continue until project end.

## **4.1 Select 10 indicator marine species for gut contents analysis**

**COMPLETED** – species have been selected from different trophic levels.

## **4.2 University of Edinburgh to develop blocking primers for the indicator species**

**Progress – behind schedule** – Collaborators at UOE have been given list of indicator species and samples of gut content DNA from each species have been sent at the end of Sept 2023 to allow for primer testing to go ahead. As such, primers cannot be tested until after output was due to be completed. There are already pre-published blocking primers for species such as Yellowfin Tuna which will speed up the process for primer design and testing. This output should be completed before the end of the project.

## **5.1 Organise school visits to the AIG DNA lab and lead practical lessons on DNA extraction.**

**Progress – on schedule** - Students have visited the AIG DNA lab and conducted sample gathering and filtering steps. Contact has been made to the local school to organise a lesson on DNA extraction.

**2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

**Locating samples** - One problem the project is facing is contacting previous collaborators to get access to samples gathered on Ascension. Contact has been made and samples are being catalogued, it is hoped samples will be sent to NHM for barcoding in the next quarter. This should not have an impact on other aspects of the project as specimens should be barcoded before sequencing is scheduled to begin in Jan 2024.

**Cold chain shipping** - Another problem the project is facing is shipping of cold chain reagents needed for sequencing, steps have been taken to mitigate this issue and it should be easier to obtain reagents now there are more frequent flights to and from Ascension. Cold chain shipping boxes have been purchased to ensure reagents stay frozen for up to 5 days in the case of delays.

**Safety of sample gathering** – the project lead and officer have decided that light trapping samples were not the optimal way to gather plankton. There are now plankton tows being performed at new moon and full moon each month.

These issues are currently being resolved or mitigated and will have no financial implications to the project.

**3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?**

Discussed with NIRAS: Yes/No

Formal Change Request submitted: Yes/No

Received confirmation of change acceptance Yes/No

Change request reference if known:

**4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2023 – 30 September 2023)**

Actual spend: ██████████

**4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?**

Yes  No  Estimated underspend: £

**4c. If yes, then you need to consider your project budget needs carefully.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

**If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.**

**NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.**

**5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?**

**If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.**

**All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.**

**Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with NIRAS through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com). The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**