

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: 31st October 2023

Project reference	DPLUS151
Project title	Building knowledge on invasive non-native species in Diego Garcia
Country(ies)/territory(ies)	British Indian Ocean Territory (BIOT)
Lead partner	UK Centre for Ecology & Hydrology
Partner(s)	BIOT Administration (BIOTA), SWCA consultants, Natural History Museum & Gibraltar Botanic Gardens
Project leader	Prof Helen Roy
Report date and number (e.g. HYR1)	HYR3
Project website/blog/social media	https://www.ceh.ac.uk/our-science/projects/building-knowledge-invasive-non-native-species-diego-garcia

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).

WP1: Plant and habitat surveys

To record vegetation in the standard monitoring sites for invertebrates and update the terrestrial plant species list for Diego Garcia. Vegetation was recorded and DAFOR scale applied for abundance in the 31 50m x 50m plots where invertebrates were recorded in June/July 2022. Since June 2022, 1569 records of 222 species have been recorded on an iNaturalist [site](#). This site also gives the distribution of these species across the islands. In the last 6 months, the project team has created, in collaboration with Meise Botanic Garden and Kew, a list of plant species recorded from the Chagos Archipelago. This list comprises over 400 plant species, native, non-native and invasive non-native. This list will be drafted into a checklist of plants for the Chagos Archipelago. A draft checklist is planned for January 2024.

WP2: Amphibians and reptiles

To perform repeated surveys on specific transects for three invasive reptiles (oriental garden lizard, mourning gecko, Asian house gecko) and the cane toad following the 2013 military baseline survey. As the herptile team did not get onto Diego Garcia, these repeated surveys were not performed. Alternatively, we liaised with BIOTA environmental officers remotely to increase opportunistic reporting of cane toads and lizards through the dedicated [iNaturalist project](#). This should at least provide an updated distribution map for the commoner species (garden lizard and cane toad) - the latter will feed into the WP6 conservation action plan for cane toads. The opportunities and ambition level of a conservation action plan for cane toads were further discussed within the project team considering the outcome of the discussions on management feasibility, ecology and impacts held at the cane toad webinar with UKOT representatives in March 2023.

WP3: Ants and scale insects

Identification of all ant samples is complete and databased in the Teams central database. At least 24 ant species have been identified. 297 samples from standardised monitoring sites, 254 from opportunistic sampling. In the last 6 months, 190 samples of ants for DNA barcoding have been prepared and are currently in the process of being run. Two papers on the ants of Diego Garcia are in preparation. Identification of most scale insect samples has been completed but there are some mealybugs which are still being studied. All associated ants, and related Sternorrhyncha (whitefly, psyllid, and aphids) have been identified. 154 samples from the standardised monitoring sites, and 336 (including other groups of insects) from opportunistic sampling have been added to the Teams central database. One paper on the whitefly has been drafted and two others are in prep.

WP4: Invertebrates

To identify as many invertebrates to the species level as possible. Samples have been distributed to taxonomic experts at NHM and prepared for DNA barcoding and are currently in the process of morphological and genetic analysis. 197 specimens have been morphologically identified (156 to species): Blattodea (at least 4 species) 59; Chilopoda (at least 4 species) 10; Dermaptera (3 species) 5; Mantodea (1 species) 4 Mollusca (2 species) 2; Orthoptera (9 species) 112. A further 412 specimens are in progress, mostly by barcoding first to streamline identification. A total of 532 specimens with barcoding have been attempted (190 ants; 126 Coleoptera; 133 Diptera; 83 Lepidoptera). The first round successfully barcoded (22 ants; 48 Coleoptera; 81 Diptera, 52 Lepidoptera). The second round with modified protocols is in progress, with results expected 31 October 2023. Additional barcoding of representatives will continue after October to ensure as many species are represented in the reference library.

WP5: Biosecurity communication, training and knowledge exchange

A cross UKOTs workshop on invasive ants has been organised for 29th November 2023, and is currently being promoted. This event will invite interested stakeholders from across the UKOTs to share best practice with respect to ant survey and ant management. Speakers are confirmed from the UKOTs, the US and Europe. In addition, since June 2022, when the team first visited Diego Garcia, over 3,018 records of 621 species were added to [iNaturalist](#). This is mostly in part, but not solely, through the efforts of the team and collaborators from other institutions. Furthermore, the biosecurity work was reviewed considering the access difficulties to Diego Garcia, and it was agreed to develop an online training course that will be delivered online over Teams. An introductory meeting was held between CEH, the NNSS and the new BIOT Environment Officers in July where work was mapped out. An introductory PowerPoint presentation has been developed to a final draft and course materials are being developed. It's expected the course will be held in Quarter 3 of the project year.

WP6: Co-design conservation and/or management plans

Two target species have now been identified for management on Diego Garcia. Working with the BIOT Administration, we will draft management plans for these species.

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.

Field trip to Diego Garcia: The original plan was for 2 large team trips to Diego Garcia for data collection and stakeholder engagement. However, there were significant logistical challenges with the first trip due to the American Airforce scheduled flight being severely delayed. Despite this, most of the team, except the WP2 herptile team, were able to reach Diego Garcia, and most of the data for the deliverables were met. At the time of writing, plans have been put in place for the WP2 herptile team to complete the planned field visit in late 2023, although we are currently experiencing difficulties in obtaining the necessary permits.

Project staffing changes: Since the departure of Jodey Peyton from UKCEH (she is now a volunteer on the project), Helen Roy has taken over as the project lead. Since then, Steven White, an experienced project manager, and Megan Williams, an expert spatial modeller, have been brought in to help deliver the project.

All the above issues have been quickly reported and mitigated in the last 3 cost-neutral Change Requests, which have been agreed by NIRAS.

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: CR9 (May 2023), CR10 (July 2023) & CR11 (September 2023)

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: £0

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?

None

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. 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**