



**Darwin Initiative/Darwin Plus Projects
Half Year Report
(due 31st October 2021)**

Project reference	DPLUS145
Project title	Assessing the mobile fish biodiversity of Bermuda's deep seas
Country(ies)/territory(ies)	Bermuda
Lead organisation	Bermuda Institute of Ocean Sciences
Partner(s)	Beneath the Waves, University of Rhode Island, Government of Bermuda, Waitt Institute
Project leader	<i>Austin Gallagher / Timothy Noyes</i>
Report date and number (e.g. HYR1)	11/11/21, HYR1
Project website/blog/social media	https://dplus.darwininitiative.org.uk/project/DPLUS145/ http://www.bios.edu/currents/bios-receives-u.k.-grant-to-study-deep-sea-marine-life/

1. 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).

This report is only for the months of August and September 2021 therefore will only feature activities from Q3 Year 1.

1.1 A portion of the deep Baited Remote Underwater Video systems (BRUVs) equipment have been purchased. There have been significant delays in this process due to supply chain delays due to the ongoing pandemic COVID 19.

1.2 The basic laboratory consumables not on back order until 2022, have been ordered and or purchased. Sources for the remaining items are being sort. The electric reel for eDNA collection has been ordered and expected to be fullfilled in October. The annual GIS license has been purchased. The software license for annotating BRUVs video will be purchased once BRUVs data have been collected.

1.3 High value surveys as identified by the Bermuda Ocean Prosperity Programme (BOPP) Marine Spatial Planning (MSP) committee have been identified and provided to the project team.

1.4 The two Fisheries Wardens to participate in the project have not been chosen to date, partly due to continued COVID 19 socializing restrictions and because fieldwork has not yet commenced.

1.5 GIS layers on historic initiates (e.g. previous mesophotic BRUVs deployments) have been acquired.

1.6 Fieldwork has not commenced

1.7 Fieldwork has not commenced

1.8 N/A

1.9 Fieldwork has not commenced

1.10 Fieldwork has not commenced

1.11 – 3.2 N/A

4.1 Landings on deewater fishery target species have been accured from the Department of Environment and Natural Resources.

4.2 Due to COVID restrictions, only one individual has been interviewed to date.

4.4 N/A

5.1 – 5.4 N/A

6.1 Bermuda Program applications were reviewed and Osei Agyapong, a 2nd Year undergraduate at the University of Cardiff was chosen to participated on the project.

6.2 The Bermuda Program report is not due until the end of October, once received it will be reviewed prior to submission to the Department of Environment and Natural Resources.

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months (for COVID-19 specific delays/problems, please use 2b). Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

The ongoing pandemic has made it impossible to follow the original implementation timetable. However, it is not anticipated to increase the overall cost of the project.

The primary reason for the delays to the timetable are the continued restrictions on personnel interactions and the sourcing of equipment and consumables. The impact of these challenges will mean there will be a need to reallocate funds from Year 1 to Year 2 to allow the continued success of the project (e.g. environmental DNA sequencing). In addition, the estimated costs for some of the equipment has changed and will require to reallocate funds between subcategories such e.g. capital equipment and other costs. As previously stated, we do not anticipate an increase in project costs.

The delays to the deep Baited Remote Underwater Video systems (BRUVs) equipment continue to make it challenging to reschedule the Year 1 planned fieldwork activities. These equipment are necessary to complimentary to the eDNA collection and vital for assessing the deep sea biodiversity i.e. the overarching objective of the project. As such, to ensure these activities are achieved, it may be necessary to use alternative individuals from the same project partners or the use of BIOS based personnel thus removing the logistical complication of non-Bermuda based personnel.

2b. Please outline any specific issues which your project has encountered as a result of COVID-19. Where you have adapted your project activities in response to the pandemic, please briefly outline how you have done so here. Explain what residual impact there may be on your project and whether the changes will affect the budget and timetable of project activities.

Supply chain logistics have greatly impeded sourcing materials for building the deep BRUVs. As such, this has delayed the timeframe for the completion of the builds.

Sourcing basic laboratory consumables for the environmental DNA (eDNA) processing continues to be extremely challenging due to their use for COVID PCR testing. At present, it is highly likely that eDNA processing will be delayed until 2022.

The continued restrictions on personnel interactions have led to a delay on both fieldwork and the decision on which two Fisheries Wardens are to participate on the project. The decision has been delayed until COVID restrictions in Bermuda are relaxed.

2c. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:	Not to date
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Formal change request submitted:	Not to date
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Received confirmation of change acceptance	No
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3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: ██████████

3b. 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 rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget 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.**

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

No

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

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

Please send your **completed report by email** to Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 25-001 Darwin Half Year Report**