

Darwin Initiative Main/Post/D+ Project Half Year Report (due 31st October 2017)

Project reference	DPLUS061
Project title	Protecting herbivorous fish to conserve Cayman Island coral reef biodiversity
Country(ies)/territory(ies)	Cayman Islands
Lead organisation	CCMI
Partner(s)	Cayman Islands Department of Environment, Smithsonian Institution, The Rare Organisation
Project leader	Carrie Manfrino PhD, Claire Dell PhD
Report date and number (e.g., HYR3)	Oct 2017 1 st Half Year Report
Project website/blog/social media etc.	www.reefresearch.org

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

This first six-month period has been very successful and the project is progressing nicely. The objectives we intended to meet by the end of year one have either already been completed or are well underway.

1.1a Field Survey Data - Data collection from the survey of the three islands has been completed. This was an extensive undertaking that required several weeks of continual field work by a team of divers. The collaborative database has been created and analysis of the data is in progress. Summary graphs are attached as means of verification

1.1b Identification of Key Herbivores - fish observations have been completed and feeding assays have been conducted on 2 of the 3 islands. Again, this has taken a team of divers several weeks of field work to accomplish. Analyses of data have commenced and the list of species is being narrowed down rapidly. A graph summarising the fish observation data is attached. Initial surveys have subsequently been conducted to determine movements of these key herbivore species and to inform the next stage (tagging) of the project.

1.2 Creation of Focus Group - Two meetings have been held and participants have signed up. A follow-up meeting will be held towards the end of the year to share progress and maintain dialogue. A photograph and two lists of attendees from these initial meetings are attached as verification. (Since I was presenting alone I was not able to take minutes.)

1.3 Empowerment of Local Students - the education module on herbivory has been created and nine students from a Caymanian senior school have been taught so far. A photo of the module being taught is attached as verification.

3.1 This component of the project has been initiated, fishermen have been contacted and the survey protocol is being designed. I am working towards surveying fishermen from all islands rather than just Little Cayman, to get a country-wide perspective.

4.3 The first draft of the education module has been designed and run. Amendments will be made as necessary

This project continues to be featured in social media and on national television. Some examples of this outreach are the attached facebook update and a clip from national television: <https://cayman27.ky/2017/06/parrot-fish-and-healthy-reefs-ccmi-study-examines-links/>

In addition to progress in the project, there have been personal developments as well. One of our partners- Courtney Cox- has moved from The Smithsonian to Rare to take up a new position there. This change does not impact the running of our project or the achievement of its goals. We wish her the best in this new role!

2a. 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.

As is frequently the case with research, as questions are answered more questions arise. Results from the three-island survey indicate there are marked differences between the reefs of the three Cayman Islands in terms of algal dominance, but how this relates to the structure of the herbivore fish populations is unclear. The herbivore population certainly affects the benthic composition of the reefs, but we are also interested in understanding what other factors are at work. We will need to address whether an abundance of a particular algal species indicates a lack of a specific herbivore. If not, we will need to look to other factors for an explanation.

Rather than actively tag fish in the preliminary stage of the tagging work, I found it was possible to obtain adequate information through visual surveys on snorkel or SCUBA. This has meant that the costs saved by this phase can be used to buy additional tags later in the year.

Hurricane Irma impacted field work for a few weeks but has not noticeably affected progress. Hopefully no other storms will do so in this final month of hurricane season.

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

Discussed with LTS: No

Formal change request submitted: No

Received confirmation of change acceptance No

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.

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4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?
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No. So far everything is running smoothly. Thank you for your support!
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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. Additionally, if you were funded under R23 and asked to provide further information by your first half year report, please attach your response as a separate 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 send your **completed report by email** to Eilidh Young at 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: 22-035 Darwin Half Year Report**