



Darwin Initiative Overseas Territories Challenge Fund Final Report

This report should be completed and submitted within a month of agreed end date of project

Darwin Ref Number	EIDCF003
Darwin Project Title	Developing a community-led marine management action plan for the Pitcairn Islands
Country (ies)	Pitcairn Islands
Award holding Organisation	University of Southampton / University of Dundee
Partner Organisations	Pitcairn Island Council, Government of Pitcairn
Grant Value	£ 24,992
Start/end date	September 2010 – March 2012
Author(s), date	Terence P. Dawson <i>et al.</i> , April 2012 (see Comments)

1. Challenge Fund Background

The marine and coastal habitats of the Pitcairn Islands must rank as one the least known ecosystems of the British Overseas Territories. The Pitcairn Islands are located approximately equidistant between New Zealand and Peru and are some of the remotest islands on earth. They are situated between latitudes 23° and 26° South and longitudes 124° and 131° West in the central South Pacific, about 2,000 km southeast of Tahiti and 1,900 km west of Easter Island (Figure 1).

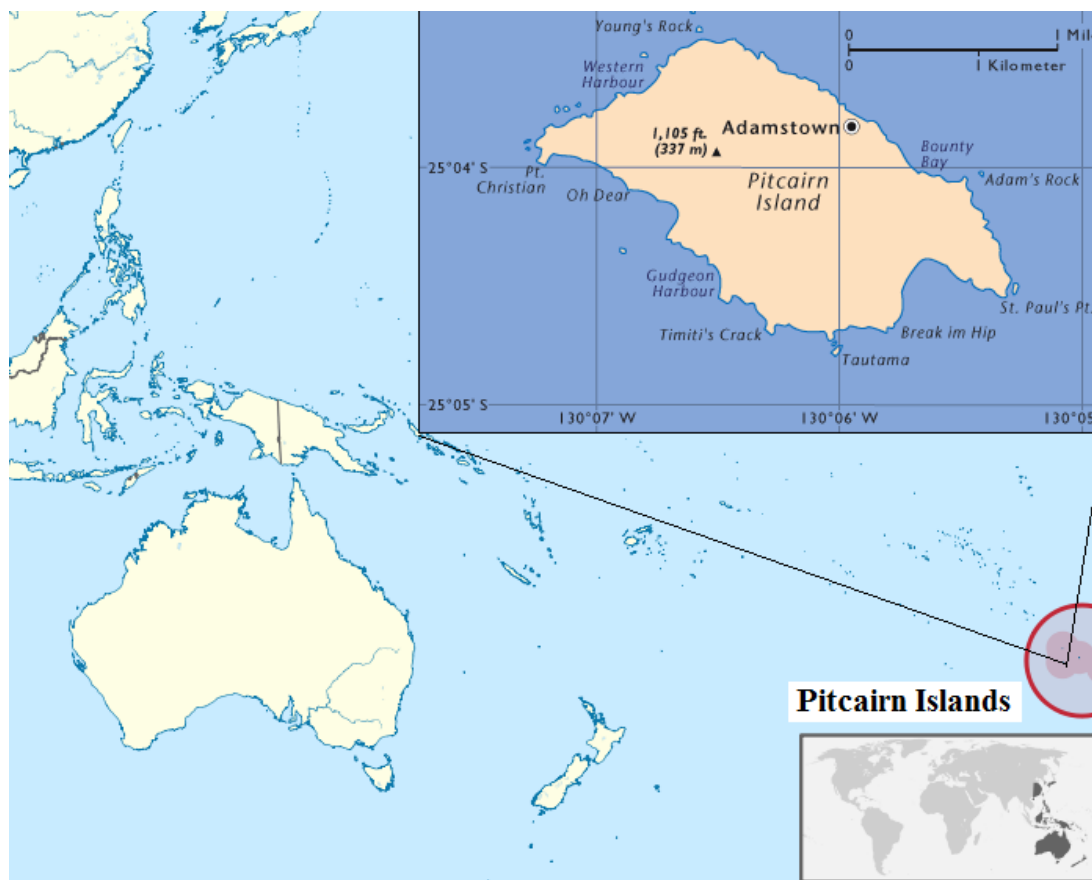


Figure 1: The Pitcairn Islands.

They lie at the eastern end of the Tuamotu Archipelago in the South Pacific Ocean and are the most south-easterly islands of the Pacific tectonic plate and Indo-Pacific province. The islands comprise Pitcairn Island (the only inhabited island of the group), Henderson Island (the largest), and the two atolls Ducie and Oeno. Because of their isolation, the coastal and marine environments of the Pitcairn Islands harbour an array of pristine and distinctive habitats, processes and species. However, much of the coastal reef systems and outlying atolls have not been scientifically surveyed to any significant degree and there have been little or no revisions to the limited earlier work of Paulay (1989) and the Pitcairn Islands Scientific Expedition in 1991-92 (Spencer and Benton, 1995). The scientific evidence for fisheries management of the Pitcairn EEZ is also insufficient for appropriate management and policy decision-making. Reef fish and crayfish are exploited by Pitcairn Islanders and consumed by the community or sold on to passing cruise vessels. However, no records exist to determine the sustainability of this practice. The project, therefore, was a one year pilot study of the marine ecosystems and fisheries assessment of the Pitcairn Islands comprising both desk-based research and a fieldwork (diving surveys) component on Pitcairn Island only (due to limited nature of Challenge funds and transport availability), together with a series of local community collaborations on Pitcairn to establish a marine management development action plan.

2. Challenge Fund Activities

The principle activities and deliverables of this project were to:

- Engage and collaborate with local and International stakeholders to consolidate earlier marine survey data, fisheries and environmental reports and local community knowledge to produce a consolidated baseline report publication (All Pitcairners, Pitcairn Island Council, Pitcairn Government, Irving, R., Schuttenberg, H., Dawson, T.P.);
- Establish an essential equipment pool on Pitcairn Island for diving and fishing monitoring and activities (boat, fishing and SCUBA equipment);
- Undertake preliminary marine surveys at selected sites to evaluate basic ecological status of the corals, fish and invertebrates of Pitcairn Island (Irving, R., Dawson, T.P.);
- In collaboration with the Pitcairn Island Council, develop a Darwin Initiative main project application to establish a future conservation and management plan for the fisheries and marine and coastal biodiversity of the Pitcairn Islands for submission in 2012 (Christian, M., Christian, S., Pitcairn Island Council, Pitcairn fishers and divers, Blanc, M.- Fisheries Advisor, SPC);

Two scientific highlights included (i) the discovery of a new (to Pitcairn) freshwater prawn species, *Macrobrachium latimanus* (Mountain river prawn), in a small pond on Tedside, Pitcairn Island (Figure 2), and (ii) diving and snorkeling with a nursing mother and juvenile of the Southern Ocean sub-species of Humpback Whales *Megaptera noveangliae*, which is recorded as 'Endangered' in the International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Figure 3).



Figure 2: The ephemeral pond of Tedside, Pitcairn Island and *Macrobrachium latimanus*.



Figure 3: Mother and Juvenile Humpback Whale off Bounty Bay, Pitcairn Island.

Main Achievements

Publications, Scientific:

Irving, R.A. and Dawson, T.P., 2012. *Characterisation of the marine environment of the Pitcairn Islands' Exclusive Economic Zone, SE Pacific Ocean*. Report to Global Ocean Legacy, a project of the Pew Charitable Trusts, London, UK.

Irving, R.A. and Dawson, T.P., 2011, *A pictorial database and check-list of the marine fish of the Pitcairn Islands*, School of the Environment, University of Dundee (CD-Rom).

Schuttenberg, H. And Dawson, T.P., 2012, *Artisanal fishing in the Pitcairn Islands: An analysis of household survey data*, University of Dundee, Dundee, UK.

Dawson, T.P., 2011, *Lobster Fisheries management and hatchery feasibility study for the Pitcairn Islands*, Interim Report to the DEFRA Darwin Initiative.

Dawson, T.P. and Christian, M., 2010, *Pitcairn Island Marine and Fisheries Preliminary Assessment Report 2010*, University of Dundee, Dundee, UK.

Conferences:

Dawson, T.P., 2011, Invited Plenary Speaker, *Marine Biodiversity, Complexity and Global Environmental Change*, Abstract and Presentation, World Conference on Marine Biodiversity, Aberdeen, Sept 26-30, 2011 (Focusing on Pitcairn case-study).

Sarkis, Samia et al. (inc Dawson, T.P.), 2011, *Coral biodiversity Challenges facing the unique coral systems of Overseas Territories*, Abstract and Presentation, World Conference on Marine Biodiversity, Aberdeen, Sept 26-30, 2011 (Presentation materials on Pitcairn marine issues).

Media and news outreach:

Professor Dawson's Marine Projects, (report and photographs of Humpback Whales), Pitcairn News (Dem Tull), October 2011, Vol. 5, No. 9, pp 3. [Http://www.demtullpitcairn.com/menu.html](http://www.demtullpitcairn.com/menu.html).

Dawson, T.P., 2011, *Humpback Whales recorded at Pitcairn Island, Southern Pacific Ocean*, Report to the Pitcairn Island Tourism Newsletter.

The Pitcairn Freshwater Prawn, Pitcairn News (Dem Tull), October 2011, Vol. 5, No.10, pp 2. [Http://www.demtullpitcairn.com/menu.html](http://www.demtullpitcairn.com/menu.html).

A new freshwater prawn species discovered on Pitcairn island, UKOTCF Southern Ocean Working Group, presented by Catherine Wensink (SOWG Secretary) and reported in the Minutes 11th January 2012 meeting, London.

Policy reports and political advocacy:

Dawson, T.P., 2011, *Marine environment of the Pitcairn islands - Briefing Notes*, Report to DEFRA, Marine Biodiversity (European & International) Department in support of UK membership of the International Coral Reef Initiative (ICRI). Copy submitted to the Joint Nature Conservation Committee (JNCC).

Invited Speaker, Panel Session: *No More Fish In The Sea? The State of the World's Oceans*, supporting the adoption (successfully voted in) of a Green Party Fisheries, Marine and Coastal Policy (including Policy document MC310: UK overseas Territories), Green Party Annual Conference, Liverpool, 27 Feb 2012.

Capacity building and community activities

A fisheries strategy and management workshop, organised by the Island Community, with presentations by Terry Dawson and Michel Blanc (Fisheries advisor, SPC) was conducted on 9th September 2011 with 14 people attending (Figure 4).

Terry Dawson and Robert Irving gave a presentation and slide show of the 'Marine life of the Pitcairn islands' to the School children of the island on 9th September 2011 (Figure 5).



Figure 4: A panorama photo of the Fisheries Workshop held on 9th September 2011.

3. Outcome & Impact of Challenge Fund

The project has been very successful in consolidating our knowledge of the marine environment and fisheries activities around the Pitcairn Islands. Discussions with the Pitcairn Government and the consequences of debates held during the fisheries strategy and management workshop on 9th September 2011 has resulted in a request by the Pitcairn Government to the DFID for budget approval to establish a new Fisheries and Marine Management Department of the Pitcairn Government. The Department (initially employing one part-time officer) will deal with catch data collection, assisted by the local fishers, develop a records database and review and amend (with SPC and University of Dundee assistance) the Pitcairn Fisheries Ordinances and by-laws for setting minimum fish sizes, etc.

Unfortunately, due to the global financial crisis, Conservation International (CI) were forced to withdraw from the project (the CI Critical Ecosystem Partnership Fund was suspended). However, in spite of this, there were no real difficulties or setbacks in the project plans or outcomes, save for revisions of visits due to the relocation of the project manager, Terry Dawson (who moved from the University of Southampton to Dundee) and fitting in with the boat schedule timings. A no-cost extension was granted by the Darwin Secretariat due to timing and availability of personnel, which resulted in a later-than-planned visit to Pitcairn Island in September 2011.



Figure 5: Robert Irving animating the marine life of Pitcairn to the island schoolchildren.

4. Lessons

It is clear that future activities involving the island community demands careful thought as to the capacity of individuals due to a small adult workforce on the island who are also busy with other professional duties, although there was an overall enthusiasm and strong appetite for marine and fisheries-based projects and the establishment of a management structure by the whole community. The islands isolation and inadequate transport facilities does present their own challenges for maintaining collaborations with external partners in the long-term. However, a solid start has been made by relationship-building through several island-based activities throughout the period of the Challenge project and through the strategic plan to create a new Fisheries and Marine Department of the Pitcairn Island Government. With recent interest from the Pew Environment Group (UK) to support an initiative to create a Marine Protected Area (MPA) for the Pitcairn Islands Exclusive Economic Zone (EEZ), we are confident that a long-term legacy can be established for the sustainable development of the Pitcairn Islands marine and fisheries environment through tourism, conservation and artisanal fishing activities.

5. Project Expenditure

Expenditure during time at the University of Southampton (to 31 March 2011):

DEFRA Darwin Project Prof T Dawson 508913 101			
	Budget	Expenditure	Balance
Travel			
Equipment			
Consumables			
Audit			
DA/PI Time (Dawson)			

Project Expenditure (University of Dundee)

Item	Budget for whole project*	Actual Expenditure (revised as at 31/3/11)	Variance** as a % (Total)	Comments
Travel Costs				International, inc. Subsistence costs
Subsistence costs				See above
Overhead costs				
Operating Costs				Local payments for services, UK travel, audit costs
Capital Costs				Equipment provision
Other				¹ Irving consultancy; ² Schuttenberg Report
Salaries (specify by individual)				Dawson Salary
TOTAL				

6. Other comments not covered elsewhere

Individuals involved in the preparation of this report:

Terry Dawson (University of Dundee), Michele Christian (Manager, Natural Resources Division, Pitcairn Island Government), Robert Irving (Sea-Scope UK), Elisabeth Whitebread (Pew Environment Group).

The Pew Environment Group established the Global Ocean Legacy project in 2005, which works to protect and conserve some of the Earth's most important and unspoiled marine ecosystems through the establishment of very large, highly protected marine reserves. The project is currently working to achieve the designation of large marine reserve for the Pitcairn Islands EEZ, and this Darwin Challenge project collaborated extensively with the Pew Environment Group during 2011 and 2012 in support of this endeavour.

Matching funds (total £41,620):

The Pew Environment Group provided additional funding of £ 21,120 to Robert Irving and Terry Dawson to support the writing of the report: *Characterisation of the marine environment of the Pitcairn Islands' Exclusive Economic Zone, SE Pacific Ocean*.

Robert Irving gave a significant additional amount of his time to the project – in the field and subsequently, which, based upon his normal day rate, would have a value of £ 8,500

Elisabeth Whitebread and Heather Bradner (Pew Environment Group) conducted the household surveys and questionnaires during their visit to Pitcairn Island in March 2011.

Terry Dawson gave a significant additional amount of his time to the project – in the field and subsequently, which would have a value in excess of £ 12,000.

Darwin Challenge Fund Reporting Guidelines

All Darwin projects are required to report on the work they have undertaken with Darwin funds and this offers you the opportunity to report on your achievements and lessons learnt and on any other issues you would like to raise. Your report should show how you have progressed against the activities outlined in your application, or clearly explain any changes and the reasons why these changes were necessary.

You are expected to prepare the report in conjunction with your partners and you are expected to submit a Final Report within 1 month of completion of the agreed dates for the award (max 6 pages excluding annexes).

We will acknowledge and read all reports submitted, but will only contact you about your report if there are specific concerns.

If you have any additional queries about reporting, please feel free to email or call on 0131 440 5181.

Checklist for submission

	Check
Is the report less than 5MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project reference number in the Subject line.	✓
Is your report more than 5MB? If so, please advise Darwin-Projects@ltsi.co.uk that the report will be sent by post on CD, putting the project reference number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	✓ (To follow)
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you involved your partners in preparation of the report and named the main contributors	✓
Have you completed the Project Expenditure table fully?	✓
Do not include claim forms or other communications with this report.	