

The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org. Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Simon Elwen
Project title	Ecology and conservation of coastal dolphins in Namibia.
RSG reference	Ref 57.09.07
Reporting period	2008
Amount of grant	£4100
Your email address	simon.elwen@gmail.com
Date of this report	04 November 2008

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Introduction of project initiative to local IAPs			Yes	The project was well received by local scientists, conservationists and tourism businesses
Identification of key sites for shore-based tracking		Yes		Due to the unknown distribution of animals at the beginning of the study shore-based tracking was abandoned in favour of only boat-based work. However, two sites were identified during the pilot study from which shore-based tracking is possible in the future.
Shore based tracking of dolphins	No			See above.
Shore surveys for stranded animals		Yes		Broad scale surveys up the beaches were not possible due to the lack of a suitable vehicle. However, local knowledge allowed us to recover one bottlenose dolphin skull with teeth. A pygmy right whale skeleton was beyond recovery. Existing specimens kept by local tour operators were catalogued.
Boat based habitat surveys & identification of key habitats		Yes		28 dedicated sea days were spent surveying the Walvis Bay – Swakopmund area collecting photographic and behavioural data from dolphins. Areas of high and low use and differences in habitat choice between the two species were identified. Areas of high potential conflict with humans were identified, notably, key tourism locations and oyster farming areas.
Mark-recapture estimation of dolphin abundance			Yes	Population estimates were successfully produced for both bottlenose and Heaviside's dolphins.
Additional achievements				
Capacity building / Training I			Yes	A Namibian student was fully involved with the project

				<p>throughout the field work and wrote up the bottlenose dolphin abundance as her honours project at the University of Namibia.</p> <p>The governmental scientist responsible for marine mammals was invited to join us at any time but work commitments only allowed her to join us at sea once.</p>
Capacity building / Training II			Yes	<p>We hosted a workshop on cetacean and turtle strandings in conjunction with the local Ministry for Fisheries and Marine Resources. More than 20 people attended from a variety of government departments, NGO's and businesses, predominantly the marine tour business.</p>
Evaluation of Marine Tour Business			Yes	<p>Key routes of communication (who to call, where to send data and deposit specimens) were created for a Namibian stranding network.</p> <p>A questionnaire survey of the marine tour operators in the Walvis Bay area was conducted. Full responses were available from 5 of the 8 operators. We successfully evaluated the size of the industry and its worth in terms of turnover and job creation for the area.</p>
Static Acoustic Monitoring		Yes		<p>Static acoustic monitoring using CPODs was tested successfully for the first time in Africa and on Heaviside's dolphins. Logistic complications (equipment failure and mainly customs delays) meant less data was collected (55 hours) than we had hoped but it added an interesting and novel dimension to the results and forged the way for future work.</p>

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Our main unforeseen difficulty was getting our hydrophones through customs. Despite governmental support from the Ministry for Fisheries, the 10-day delay added to the delay from

their late departure from the UK and significantly reduced the amount of active recording time that was available to us.

3. Briefly describe the three most important outcomes of your project.

We have produced the first abundance estimates for Namibia of Heaviside's and bottlenose dolphins and provided these to the Government and interested NGO's.

We successfully described key habitat areas for both species in Walvis Bay and identified areas of potential conflict, mainly a growing aquaculture industry (oysters) and the main routes of a growing tourism industry.

We evaluated the size (number of boats), turnover and number of jobs involved in the marine tour industry in Walvis Bay. This industry is growing rapidly and the number of boats far exceeds international guidelines. There was no official assessment of the size of the industry nor is there any legal control of through e.g. "Whale Watching guidelines", merely an internal Code of Conduct that is not well known by skippers and regularly ignored.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

A local student was involved in all aspects of the project and learnt field and analytical skills.

A public workshop was held to inform and educate people about cetacean strandings, why they are of scientific value, what data to collect, rescue protocols etc.

Regular interaction with members of the tour industry at the boat launch site, resulted in much informal knowledge sharing.

A public end of season talk was presented in which our results and concerns were shared with the community and marine tour operators.

Knowledge of the size of the dolphin populations and more details about the animal's biology and ecology, is now available to local tour operators and managers.

5. Are there any plans to continue this work?

Yes.

Grants have been applied for to cover the core costs of continuing with the habitat surveys and photographic mark-recapture for 4 more seasons to include seasonal variation in the data set, improve the precision of the abundance estimates, generate more accurate maps of the habitat use with the goal of reducing human- dolphin conflict and educating marine tour operators.

We have also applied for grants to buy hydrophones to allow for 24 hour-a-day static acoustic monitoring in a series of sites in high and low human impact areas to investigate habitat use and the effects of boats on dolphins.

We are collaborating with colleagues from the Wildlife Conservation Society working in West Africa

to collect data on humpback whales as the stock structure in Namibian waters is currently unknown.

Also, colleagues at St Andrews University in Scotland will be collecting acoustic data from bottlenose dolphins as part of a PhD student's larger comparative study.

6. How do you plan to share the results of your work with others?

We have completed our report from the pilot season and sent copies to the Ministry for Fisheries and Marine Resources, and NGO's: Namibia Nature Foundation, Coastal Environment Trust of Namibia and NACOMA, WWF and the Albatross Task Force.

Copies will be sent to all the Marine Tour operators and skippers.

We will continue to update our weblog <http://namibiandolphinproject.blogspot.com> and have plans to develop a full website with downloadable information on the species found in the area and the research we are conducting.

An article about the project was printed in the Namibian Times during the pilot study and we hope to continue this relationship with the local press.

A popular article is planned for the magazine Africa Geographic about dolphins in Namibia and two scientific papers detailing the findings of the pilot study are in preparation.

7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?

As top up funding from other grants applied for did not come through, it was not possible to stretch our RSG grant over 2 field seasons. Therefore, only a winter field season was worked (18 May – 8 Aug 2008) but more time was spent at sea during this period.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

We have used an exchange rate of 15 Namibian \$ to the Pound which was the average exchange rate during our field season. Due to not getting an additional grant which we had hoped to use to cover accommodation, subsistence and a few extra items of equipment, we had to use the RSG grant to cover these as well and save where we could.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Canon 70-200L Lens with filter	1,200	623.07	577	Lens with Image stabilisation was budgeted for. Needed to save money so got the 'unstabilised' lens and procured through colleague in US at height of US\$/£ exchange rate dip
Binoculars x2	160	93	67	We only got one pair of Nikons to save money
2x 2G memory cards	0	14.65	14.65	

for camera				
2x 160G HDD for data	12	122.93	2.93	
1X PC cables for GPS	0	24.38	24.38	
Boat fuel 40x sea days @ £60/day	2,400	1,200	900	7 sea days in one season. We managed to get a boat sponsored at no rental cost by one of the tour companies, which saved considerable money on this aspect of the budget and fuel had not increased as much as expected between grant application and field work
Within site transport & surveys	200			Fuel costs included in above. The PI had to buy a car with private money for the project, it was fuelled through the grant.
Travel: Cape Town – Walvis Bay	700	308	392	Flew from Johannesburg (much cheaper than flying from CPT as originally planned). Includes overnight in WDH, shuttle to the coast and car fuel back up in project vehicle.
House rental	0	400	400	We managed to find cheap accommodation for the team through colleagues in the field.
Groceries	0	458	458	3 people over 2½ months.
Costs of moorings (rope, anchor weight, buoys etc.) for hydrophones (1 C-POD & 2 T-PODs) and courier fees back and forth to the UK (DHL)	0	459.23	459.23	Grant from British Ecological Society to Ruth Leeney covered cost of one C-POD (hydrophone) (£1200), her flight UK-Namibia (£800). We had to use RSG money to ship the PODs (T-PODs were borrowed from colleagues at the University of St Andrews, Scotland)
Sundries	0	105	105	Multi plugs, extension cable, replacement USB card reader, knives, gloves, measuring tape for k strandings. Licensing, some parts and advertising costs (when trying to sell) project car again.
Insurance for Camera equipment	0	84.84	84.84	Including SE's personal camera equipment (body, batteries, water proof case) which was used for the project as we couldn't afford to buy a project camera
Travel Insurance (SE)	0	64.19	64.19	
Car rental – 4 days	0	81	81	Rented a Golf for 4 days at beginning of project to move team

				and equipment around before resorting to buying own car from personal money
Total	4,780	4,038.29	61.71	

9. Looking ahead, what do you feel are the important next steps?

The project needs to maintain its momentum to keep up ties with local scientists, conservationists and tour operators and develop long term conservation and research initiatives. The Namibian Government needs to be encouraged to develop guidelines and laws pertaining to wild cetaceans, how boats and people may interact with them. Most importantly, needs to limit to the size of the marine tourism industry before it grows any further and investigate methods to control the interaction of the industry with the animals.

Data needs to be collected in both winter and summer as there are reported differences in dolphin abundance and distribution – this will also allow better (longer term), more precise abundance estimates to be generated.

Data collection needs to be expanded spatially. We have planned to include some visual survey effort and 2 hydrophone deployments at Lüderitz, 400km to the south. The lack of harbour facilities along the coastline makes getting to the majority of it impossible by small boat, but has the benefit of low human impact on the environment

More focussed habitat surveys, with behavioural observations need to be collected to look at delineating possible ‘no go’ areas for tour boats to provide dolphins with some reprieve(different behavioural states are more or less sensitive to disturbance and there was some indication of bottlenose dolphins feeding more in the bay and resting more along the open coasts).

Dedicated shore and boat-based observations of dolphin behaviour (especially bottlenose dolphins) should be collected to describe changes in behaviour with the number and behaviour of boats present and fed back to tour boat skippers and owners to allow for the development of better practises.

Acoustic monitoring needs to be implemented using a network of hydrophones (C- PODs) in high and low human impact sites (e.g. Walvis Bay versus Sandwich Harbour and Lüderitz) to monitor 24Hr habitat use in a variety of environments and acoustic behaviour relative to boat traffic.

10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

Yes – during all public presentations (Strandings workshop and end of season talks) and on the final report submitted to the Namibian government, NGO’s, tour operators and conservationists.

11. Any other comments?

Several aspects of our project changed from the original proposal submitted to RSG. This was to be expected to some degree as this was a pilot study. The flexibility of the RSGF grant and recognition of potential changes to projects and the need for adaptation to local conditions is one of its greatest benefits to this grant.

Although we could not do shore-based observations of behaviour nor were we able to run the project over two seasons. However, we feel the project was very successful; it was well received by all local parties who were very happy to be getting some data about the local dolphin populations. We also managed to include several very important aspects not originally planned.

The addition of static acoustic monitoring through the grant from the British Ecological Society to Ruth Leeney (an addition to the project subsequent to my RSG application) was a great benefit to the study. We pioneered the use of C-PODs and T-PODs in Africa and on Heaviside's dolphins and proved their utility for long term, 24hr monitoring of cetaceans in this harsh, exposed environment. We also collected novel data on the spectrum of Heaviside's dolphin acoustic behaviours which is now being prepared for publication.

The workshop we hosted on stranded cetaceans was well received locally. And our efforts to collate strandings data and then to re-organise a strandings network with reporting procedures and contact people would not otherwise have occurred and much valuable data would be lost. We were also able to assess the marine tourism industry in Walvis Bay. Before our work, the government did not know the exact number of tour boats operating in the area, the financial value of the industry and the number of jobs created by it in the area. Although the value is high and the number of jobs provided by the industry adds significantly to the economy of the small town of Walvis Bay, the industry needs to be controlled, have its growth limited and have more stringent rules of behaviour implemented as soon as possible as the impact the animal populations in the area are likely high but currently unmeasured.

We would like to thank the Rufford Small Grants Foundation for providing us with the financing to be able to run this project. We hope you are satisfied with our results.