

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. The Final Report must be sent in **word format** and not PDF format or any other format. 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. Please note that the information may be edited for clarity. 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	Dr Simon Elwen
Project title	Investigating the abundance and population dynamics of the endemic Heaviside's Dolphin (<i>Cephalorhynchus heavisidii</i>) and dusky dolphins (<i>Lagenorhynchus obscurus</i>) within the Namibian Islands Marine Protected Area.
RSG reference	11189-2
Reporting period	Jan 2012 – Jan 2013
Amount of grant	£5900
Your email address	Simon.Elwen@gmail.com
Date of this report	18 January 2013

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
Overall project objective: generate baseline data on the cetacean community of Lüderitz Bay (LB) and the surround Namibian Islands Marine Protected Area (NIMPA) in southern Namibia, including information on species presence, habitat use and abundance. These two components of the project (LB and NIMPA) took place over the same time frame during a 4-month field trip to Lüderitz. Our RSG grant funded the accommodation and travel costs to Lüderitz and the small boat work within LB. The ship-based survey work within the NIMPA was funded by the Nedbank Go Green grant with ship's time provided by the Namibian Ministry of Fisheries.				
Lüderitz Bay				
Population abundance		Y		Grading and matching of photos and the development of the initial catalogue of individuals using LB has provided us with an initial (rough) abundance estimate for the bay.
Residency		Y		As above – we have preliminary results from the catalogue showing long term residency of individuals within LB and much higher resighting rates than in Walvis Bay (WVB - our main field site 400 km to the north).
Population structure		Y		Catalogues from Walvis Bay and LB are not yet ready to cross match, but preliminary work found no resightings yet. Although not the main focus of the study in LB, as we didn't expect to see them, on several occasions' bottlenose dolphins from the small WVB population (about 100 animals) were observed in LB. This is an important result as it strongly suggests that the range of this population may be expanding due to increased human activities in WVB.
Habitat & distribution			Y	GPS track data of search effort and dolphin encounters has been processed to produce maps of dolphin distribution within the LB area.
NIMPA:				
Species presence			Y	Feeding sightings and GPS data straight into an MS Access database while on the ship, these data have already begun to fill in a major knowledge gap in the offshore waters of southern Namibia. Species seen include the sei, minke and humpback whales (all 'out of season') and dusky and Heaviside's

				dolphins with southern right whale and common dolphins reported (but unfortunately not seen by us).
Distribution patterns			Y	As above, our data have already been mapped and show clear differences in habitat use between species and by area within the NIMPA
Effectiveness of Acoustic surveys within the Benguela				With 158 survey hours (13 days and 5 nights over 6 trips) completed this season, we have comprehensively tested this survey approach in the Benguela ecosystem and found it to work exceptionally well. With the addition of the acoustic component to the visual survey, we have massively increased the time we are able to effectively survey by working at night and in misty conditions.

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

The LB small boat surveys were very successful with little or no problems. Previous experience in the area allowed us to make realistic and achievable plans and new engines on our research boat made mechanical issues a thing of the past. The NIMPA surveys were held up by the delayed delivery of the hydrophone from the UK, despite several weeks of leeway in the plans. Getting ship time was challenging as the ship was required to do other work within the Ministry of Fisheries and then major mechanical failure in late May meant our season was cut short. However, this was a pilot study and this survey technique (combined acoustic and visual) has never been done in Southern Africa before. We are very satisfied with our results and feel it all went well and we ironed out details in terms of what is possible with the hydrophone being towed (minimum survey times, survey depths, ability to join other cruises for opportunistic data collection etc.)

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

1. The NIMPA surveys have provided the first set of planned, effort-controlled survey data of Namibian offshore waters for over 25 years. This dataset is thus of major significance for being able to feed back this information into environmental impact assessments and plans being made for seismic survey work and phosphate mining planned in the region.

2. The LB inshore work has massively built up the dataset available on Heaviside's dolphins for Lüderitz and provided the first estimate of abundance and ecological data for the species in southern Namibia.

3. Our work in LB has allowed us to collect important comparative data on the presence of dusky and bottlenose dolphins also using the bay. The apparent range extension of Namibia's small population of bottlenose dolphins is striking and of conservation importance as it implies reduced use of their core habitat in the WVB area.

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

Community awareness within Lüderitz was a relatively minor goal of this project as we knew it that the challenges of a pilot study would take up a lot of our time. We had hoped to provide public talks and talks within schools while in Lüderitz. Although we made contact with several schools in the area, we had no positive feedback and a disappointingly apathetic attitude from staff in terms of getting us involved. Due to this and time constraints from research, we were not able to do any in-school talks, although outreach remains an important consideration for our project.

On a positive note – we were very actively engaged with the local research community and gave talks at the Ministry of Fisheries and attended meetings with the MFMR, the tuna fishing industry and representatives from the seismic survey vessel working in the area at the time. We provided important background information to all involved on the known impacts of seismic surveys on marine mammals and fish. In addition, we have talked about the NIMPA project at several other locations including the University of Namibia (March 2012), African Marine Mammal Colloquium (May 2012), Nedbank Go Green PR event in Windhoek in Oct 2012 (Nedbank funded the hydrophone and equipment for the NIMPA surveys) and at the SCOR Capacity Building regional meeting in Nov 2012 (SCOR funded our collaborator Rene Swift's travel to Namibia to set up the NIMPA survey equipment).

5. Are there any plans to continue this work?

Definitely. This is a very variable ecosystem with cycles of boom and bust within many of the small pelagic fish stocks. Both the NIMPA and LB work need to continue of a 3 year time frame to provide enough data to get an understanding of variation in numbers and distribution patterns within and between years, and to have any hope of detecting a trend in the numbers of animals (if any). We hope to apply for an RSG Booster Grant this year

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

When the data are more processed and considered accurate, we will release a series of popular articles highlighting our work and the importance of this area for dolphin conservation. Our end goal is a series of scientific publications. The work on Heaviside's dolphins in Namibia will form part of an MSc thesis at the University of Pretoria (Sara Golaski 2013-2014)

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

All the money was spent on a single 4-month long field trip to Lüderitz from our base in Cape Town. Due to the remoteness of Lüderitz, it is very difficult to do short trips there and still work effectively.

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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Boat renting @N\$1000/day x 40 sea days	£3810	29 days x N\$1000 = £2071	11 days under planned number on small boat	Weather was poor for extended periods, but data collection was very productive, and offshore ship work was prioritised.
Accommodation @ N\$5000 x 3 months	£1480	N\$6000 x 3 months = £2571	N\$3000 (~£214) over budgeted amount.	Still a very good deal for 6 people!
Accommodation between sites on the road	As above	N\$700 + R840 = N\$1540 (£146)	NA	As above
Fuel Return Cape Town to Lüderitz N\$3250 x 2 trips	£620	N\$4443 + N\$4373 = N\$8817 (£840)	£220 over budget	Towing the boat increased consumption more than hoped for.
Total	£5858	£5628		

** Note – I've used an exchange rate of £1: N\$10.5 as in the original proposal. The exchange rate is now £1:N\$14*

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

Processing the photo ID data from the LB work on Heaviside's dolphins is paramount. This work is now the focus of an MSc thesis (Sara Golaski, University of Pretoria, 2013-2014) who will begin in February. Once these data are processed, we will be able to get more accurate abundance estimates and address our other project foci including comparison of individuals, diseases, scarring rates and behaviour between study sites throughout the Benguela ecosystem.

The NIMPA work is still in the very early stages and is being led by my colleague Dr Tess Gridley (Vice Chancellors Post Doctoral Fellow at the University of Pretoria). We are currently trying to identify an MSc student to work on the spatial aspects of the data analysis.

Once we have made progress with these aims, disseminating the information through public talks

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 – The RSG name and logos are prominently shown on our website and blog (www.namibiandolphinproject.com). Further we have talked about the NIMPA project at several other locations including the University of Namibia (March 2012), African Marine Mammal Colloquium (May 2012), Nedbank Go Green PR event in Windhoek in Oct 2012 (Nedbank funded the hydrophone and equipment for the NIMPA surveys) and at the SCOR Capacity Building regional



meeting in Nov 2012 (SCOR funded our collaborator Rene Swift's travel to Namibia to set up the NIMPA survey equipment).

11. Any other comments?

The RSG fund is a fantastic initiative and I am very grateful for the support I have received from your organisation since I initiated the Namibian Dolphin Project with RSG funds in 2008. The progressive nature of the funds/grants is novel and very useful, and it not only maps the natural progression of a research project but encourages researchers to continue growing their ideas and projects.