

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford 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	O. Alejandra Vargas Fonseca
Project title	Assessing the effectiveness of Marine Protected Areas for inshore dolphin conservation using aerial surveys to determine distribution, abundance and habitat use
RSG reference	18967-2
Reporting period	2016
Amount of grant	£5000
Your email address	ale@earthcollective.net
Date of this report	March 30, 2017

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
Monthly aerial surveys throughout the year				A total of nine aerial surveys were concluded throughout the year. Two surveys were cancelled due to bad weather
Two PhD chapters and two scientific publications				Data is under analysis and results are expected to be ready by the end of 2017
Public outreach				Three different public talks were presented in Plettenberg Bay during 2016

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

For aerial surveys to be conducted safely and effectively such that animals can be successfully sighted, identified and counted, suitable weather conditions are needed. These must include low wind speeds and low swell, little or no cloud cover and high water clarity. The combination of these is very rare for the study area, and coupled with the fact that the pilot was not always available when conditions were suitable, it meant that the windows of opportunity for surveying were scarce. For this reason, no surveys could take place in three of the 12 months of the year.

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

- (1) We achieved nine successful surveys over the period of 1 year, therefore most months were represented. These surveys together with two surveys that were successfully completed before the period of the grant will allow for assessment of temporal patterns and abundance of Indo-Pacific bottlenose dolphins and other species, and for comparison with boat surveys that were also conducted in some of the months (and prior to the initiation of aerial surveys). In-depth analyses are in progress.
- (2) From preliminary analyses, low re-sighting rates of known individuals (fin recognition) from the boat surveys seem to confirm that bottlenose dolphins in the study area are migratory and possibly visit the area seasonally, but further validation is required (encounters were greatest during the months of autumn, March-May).
- (3) Relative to a previous boat-based study in Plettenberg Bay in 2002-03, rates of encounters were found to be similar, but the mean group size decreased by as much as 80% between the two periods. Declines in group size of Indian Ocean humpback dolphins *Sousa plumbea* have also been observed for the

area. The decreased group sizes may indicate changes in social structure in response to altered prey availability. However mark-recapture analyses based on fin recognition need to be completed before it can be ascertained whether there has also been a decline in abundance.

Additionally, a report detailing the above early findings was submitted to and is soon to be published in the Department of Environmental Affairs' Branch Oceans and Coast's annual State of the Ocean Report.

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

A total of four public talks were presented in 2016:

- (1) 'Investigating abundance, distribution, habitat use and genetics of Indo-Pacific bottlenose dolphins along the southeast coast of South Africa''. Angling Club, Plettenberg Bay. April 2016.
Invited to talk during a scientific evening hosted by the Plettenberg Bay Hope Spot Committee, to an audience of approximately 60 citizens, stakeholders (including local reserve management staff and tourism operators) and scientists from both governmental and non-profit organisations.
- (2) 'The Indo-Pacific bottlenose dolphins along the Garden Route, South Africa''. Whale song hotel, Plettenberg Bay. April 2016.
- (3) Invited to talk to Probus Plettenberg Bay to an audience of 55 retired professionals and stakeholders in the area.
- (4) 'Update of the Garden Route Dolphin research and acoustic monitoring project''. Robberg Nature Reserve, Plettenberg Bay. April 2016.
Invited to talk to the Outeniqua Naturalis Club to an audience of 35 retired people residing at various places along the Garden Route.

By giving these talks, I was able to interest many people in my project including as to why and how it is being done, my experiences and findings so far, and the relevance of the study to marine conservation management and to themselves as concerned citizens and naturalists. After each talk, I was required to answer several questions and I received highly encouraging feedback and developed contacts to further research and outreach activities. I feel that the talks were positive both for myself and the community.

5. Are there any plans to continue this work?

This project is part of the Garden Route dolphin research project, which has three main elements in terms of data collection: boat based surveys, aerial surveys and acoustic surveys focused mainly on the coastal dolphin species, i.e. Indo-pacific bottlenose dolphins and Indian Ocean humpback dolphins. The aerial and boat surveys are currently in a hiatus because the field work phases for two student projects focusing on the species have been completed and analyses and writeups are underway. Products of the thesis and papers that come out of this will however include recommendations for future research and monitoring, emphasising a long-

term monitoring approach to align with adaptive management. Another student project focusing on the acoustics of the above species has recently gotten underway.

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

A total of four articles are to be published in peer-reviewed scientific journals after submitting my PhD thesis. The articles includes: (1) abundance; (2) distribution and habitat use; (3) genetics structure; and (4) seasonality of the Indo-Pacific bottlenose dolphins along the southeast coast of South Africa: implications for spatial management.

It is intended to publish at least two or three popular articles to reach a broader community with in South Africa. (E.g. the Wild Magazine, SANParks Times and Sancor newsletters).

In order to reach the local community, it is intended to distribute information brochures with preliminary results of the study's to various accessible outlets and post information to a website where further information can be accessed including the sounds of the marine mammals recorded through the acoustic project.

It is planned to give talks to historically disadvantaged communities including school children along the Garden Route to expose them to the wonders of marine life, the threats to it and why it affects them, and to raise awareness about the needs and opportunities in marine research and conservation management.

Lovbel7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

It was intended to use the funding for 2015 and 2016 aerial surveys. The actual length of the project was accurate due in that we were looking at collecting data through aerial surveys for one year.

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
35 hours of aerial surveys with Garden Route Gliding	3039	2625	414	Total of 6 surveys. Rate: £75/hour
13 hours of aerial surveys with Bateleurs Flying for the Environment	0	0	0	The Bateleurs is an NPO that helped us with 3 surveys

5 flying hours with a volunteer private pilot	0	100	-100	Cost to cover plane fuel
Subsistence (4 days per month*12months)	688	688	0	Approximate cost
Accommodation (4 days per month * 12months)	1055	1055	0	Approximate cost
Car transport (£0.23/km * km)	140	174	-34	Total 755km: 3 surveys departed from George airport (205 km return trip) and 7 from Plettenberg Bay (20km round trip).
External Hard Drive for storage of images	72	72	0	
Insurance	0	480	-480	
TOTAL	4994	5170	200	

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

Finish all the analysis and write up the results in order to submit my PhD in December 2017. After this it is intended to do all the publications (see above for reference).

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

Yes, all public presentations and information brochures included the RSGF logo and/or explicit reference was made of their support during the talk.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

12. Any other comments?

Sincere thanks again for this incredibly valuable and much needed support.