

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

| Grant Recipient Details    |  |
|----------------------------|--|
| <b>Your name</b>           | Lida E. Pimper   |
| <b>Project title</b>       | Assessment of the Mitochondrial DNA variation and Conservation status of the Spectacled Porpoise, <i>Phocoena dioptrica</i> , around waters off Southern South America |
| <b>RSG reference</b>       | 8381-2   |
| <b>Reporting period</b>    | April 2011 - April 2012  |
| <b>Amount of grant</b>     | £5610  |
| <b>Your email address</b>  | <a href="mailto:liditas@gmail.com">liditas@gmail.com</a>   |
| <b>Date of this report</b> | May 14, 2012   |

**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  |
|---|--------------|--------------------|----------------|---|
| a) Laboratory analyses of spectacled porpoise samples with molecular methods (DNA extraction, PCR amplification of mtDNA fragments, sequencing)   |              | X                  |                | Samples of dry skin, teeth and bones of 156 specimens were analysed. DNA was extracted successfully from 84 samples (54%). A fragment of 380 bp of the mtDNA control region was successfully amplified and sequenced in 50 samples. We still need to re-analyse the rest of the samples that didn't work. |
| b) Analyses of data from DNA sequences  |              |                    | X              | Analyses were performed in samples successfully amplified and sequenced.  |
| c) Survey cetacean mortality as bycatch on nets   |              | X                  |                | This is a long-term goal. However, we have already started with survey expeditions during the artisanal fishing season.   |
| d) Review number of fishermen, types of nets used and fishing locations registered at the state agency (Dirección General de Pesca)   |              |                    | X              | Current official information was consulted and digitalised.   |
| e) Work with fishing communities and implement mitigation measures to carry forward a sustainable activity  | X            |                    |                | This is a long-term goal. However, we have already started interviewing local fishermen about their needs and troubles, and also local policy makers who are currently working and planning mitigation measures related with different bycatch species.   |
| f) Generate essential baseline data on the conservation status of the spectacled porpoise through publication in international peer-reviewed journals and posters in scientific conferences |              | X                  |                | Preliminary genetic data was presented allowing a first insight into the genetic variation of the spectacled porpoise. There are still more samples to analyse that will complement our studies.  |

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

There are still a number of samples to analyse in the lab. This is due to technical problems with DNA extraction and PCR amplification of teeth and bone samples (DNA is degraded and in low concentration).

We planned to do several flights to Tierra del Fuego, but plane tickets were expensive than initially budgeted. So we only travel twice (from Buenos Aires to Tierra del Fuego) but stayed longer. We started with the surveys but could only go to three expeditions (once a month) due to some mechanical problems with the vehicles (truck and an all-terrain-cycle) that cause some delay in our schedule. These problems were overcome after some weeks in the garage.

Although we did have some problems in our field trips, we gained experience in many different aspects that will help us in the coming seasons.

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

1) We analysed 50 samples of spectacled porpoise with molecular methods. This is the first study of the genetic variation of this species. Preliminary results showed high levels of mtDNA diversity, as expected in large size and stable populations, and similar to other species of porpoises.

2) We started an electronic database of artisanal shore-based fishermen registered in Tierra del Fuego (with official and non-official data).

3) We started with a long-term goal of survey cetacean mortality as bycatch (with monthly field expeditions) during fishing season in Tierra del Fuego.

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

We have organised bimonthly field expeditions during fishing season (November to March) to survey cetacean bycatch in artisanal shore-based fishing nets with post-docs working in the area, and internship students at Museo Acatashun de Aves y Mamíferos Marinos Australes. We were able to talk with many different fishers in the area, listening to their experience and problems.

We have made good relationships with people working in the state agency (Dirección General de Pesca), and collaborate with them to develop new strategies to mitigate bird and cetacean bycatch in nets.

We are developing educational posters with basic information of the two most common marine mammal species (Commerson's dolphin, *Cephalorhynchus commersonii*; and spectacled porpoise, *Phocoena dioptrica*) incidentally found in shore-based nets in Tierra del Fuego. We will distribute these posters in schools, universities, research institutes, cooperatives, and state and wildlife agencies.

**5. Are there any plans to continue this work?**

Yes, definitely. We plan to continue with beach surveys and field expeditions to get to know the number of fishermen and nets in each area during each season; species and number of marine

mammals incidentally caught in nets; and to collect samples of specimens for DNA and isotopes analyses.

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

Preliminary results of my research were published in a peer reviewed journal (Pimper, L.E.; Goodall, R.N.P.; Remis, M.I. 2012. First mitochondrial DNA analyses of the spectacled porpoise (*Phocoena dioptrica*) from Tierra del Fuego, Argentina. Mammalian Biology. DOI:10.1016/j.mambio.2012.02.002) and presented in a national meeting (Pimper, L.E.; Goodall, R.N.P.; Remis, M.I. 2011. 'Population genetics analysis of the spectacled porpoise *Phocoena dioptrica*'. XXIV Jornadas Argentinas de Mastozoología, Sociedad Argentina de Mastozoología (SAREM). La Plata, Buenos Aires, Argentina).

I also plan to present talks and educational posters at schools, cooperatives and organisations in Tierra del Fuego (from universities and research institutes to wildlife agencies) about basic information of cetacean species incidentally caught in the area and bycatch mitigation measures implemented in other regions.

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

We started with lab work after funds were available in April 2011. We are still using the funds of the RSG to complete the molecular analysis of samples and print educational posters to hand out in schools, universities, research institutes, cooperatives and state agencies.

## 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.

The local exchange rate used was approximately 1£ = \$6.40 (at the time we received the money).  
£5610 = \$35611,86 (with bank discounts and commissions)

| Item   | Budgeted Amount | Actual Amount | Difference | Comments   |
|--|-----------------|---------------|------------|--|
| Laboratory Analysis – Reagents and disposable material           | 1470            | 1470          | 0          | We bought all the reagents needed and budgeted   |
| Laboratory Analysis - Sequencing                                 | 1050            | 1050          | 0          | Although we still need to finish with the sequencing of samples, we have already paid for the total number of samples. |
| Expedition – 6 plane tickets Buenos Aires-Ushuaia – Buenos Aires | 690             | 628           | +62        | Only 2 round tickets were purchased (stays were longer than initially planned). Plane tickets increased their prices.  |
| Expedition – food and accommodation                              | 450             | 347           | +103       |  |
| Expedition – Fuel for vehicles                                   | 500             | 148           | +352       |  |
| Laboratory Equipment   | 1450            | 1450          | 0          | A DNA quantifier was bought with Rufford funds and £1000 from other funds.   |

|              |      |             |      |  |
|--------------|------|-------------|------|--|
| <b>TOTAL</b> | 5610 | <b>5093</b> | +517 | This money will be expended for 100 educational posters to be distributed in Tierra del Fuego. |
|--------------|------|-------------|------|--|

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

Commerson's dolphin and spectacled porpoise are the two species most frequently found on the shores of Tierra del Fuego. It is important to assess bycatch of marine mammals in gillnets of artisanal fishermen to understand how this anthropogenic threat affects these species. Since the Spectacled porpoise is one of the least known species of cetaceans, we still need to gather information on abundance and migration for an adequate management of the species.

We also need to raise public awareness of the marine species and threats (such as pollution, habitat degradation in coastal waters, oil drilling and production, and commercial shipping traffic) in waters around Tierra del Fuego through talks to the local community and fishermen, to increase interest in their marine fauna, a sense of ownership and the need to protect them.

**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, we used the RSGF logo in the poster presented in a national meeting and in the educational posters that we are developing. We also acknowledge RSGF in our paper.

**11. Any other comments?**

We are very grateful for the support and confidence of Rufford Small Grants Foundation to our project.