

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	Mr. Ricardo Alvarez
Project title	Population assessment and conservation status of the marine otter (Molina 1782) and the southern river otter (Thomas 1902) in the islands and channels of southern Chile
RSG reference	33.11.09
Reporting period	2011-2012
Amount of grant	£11,900
Your email address	ralvarez@cmarina.org
Date of this report	15/09/2012

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
To obtain scientific knowledge about the marine otter in southern Chile			X	Information about the habitat and abundance of marine otter were obtained
To determine the conservation Status of the marine otter in southern Chile			X	The information obtained will support the conservation status in areas from southern Chile
To determine importance areas for the conservation of marine otter			X	
To propose a standard methodology to monitoring the marine otter			X	Improvement of a methodology to estimate abundance was proposed during the implementation of this project. Data of two previous expeditions were used either. The research is based on the application of a repeated count binomial N-mixture model to estimate otter abundance. It is assumed that surveys count a fraction of populations and the model attempts to determine what fraction of the population has been observed and then attempts to infer an estimation of abundance.
To test a methodology for the southern river otter in the southern Chile	X			This objective was not achieved because the recorded of southern river otter were scarce, so the methodology cannot be tested.
To design a diffusion video about the marine otter conservation in the southern Chile			X	One video with information about the marine otter in this expedition and including the information of other two expeditions was elaborated, distributed and upload to the web site. https://vimeo.com/50077744

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

The main difficulty in this initiative was to implement the expedition. The rent of a vessel that meets all safety and technical requirements for the researcher team at a reasonable price was not possible according to the project schedule because the cost of rent was extremely high in the original schedule. For this reason the project team decided delay the project 1 year (until the next summer season). This happened because in that time the salmon farming joined in a profound health crisis,

which arose in the last 3 years the prices of vessel rent. Only this year it was possible to find a convenient price of vessel rent and finish all the activities considering in the project, diminishing slightly the number of the days of the expedition estimated originally and considering only one big expedition and not two as was originally scheduled.

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

- Recorded of the marine otter was obtained from the 50% of the quadrants originally proposed and were useful to estimate abundance of the species.
- Habitat characteristics of the otters was obtained from the 50% of the quadrants originally proposed
- Faeces to analyse diet of the marine otter was obtained in the 70% of quadrants surveyed
- A reliable estimation of density at 2.29 otter/km was obtained of the data using N-mixture model approach¹.
- A MSc in Conservation Science in Imperial College London thesis about estimation of marine otter abundance was carried with the data from this project.

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

5. Are there any plans to continue this work?

The Otter Conservation Initiative will continue working in the southern Chile in the next years. Four important issues have been considered for the continuity. First, monitoring plan for the sites surveyed, following the work supported by TRF. This is, monitoring annually approximately 20-30-point counts of the 80 counts points surveyed, 60 point counts considered in the three expedition supported by TRF more 30 counts points in previous expeditions. Second, disseminate the information obtained until now to continue promoting the otter conservation. These activities have been carried out for the NGO in the last years, but the next it is planning work with teachers and student in the areas where the otter are more abundant. Third, work together with local communities and authorities in the protection of the most important areas for the populations of the marine otter conservation. Finally, one important element as a result of this project was low information about southern river otter obtained. The next initiatives have to consider include this species and probably apply surveys exclusively oriented to assess its distribution in areas of southern Chile.

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

For this project three ways to share the results have been considered:

- Disseminate the short movie about the marine otter in social networks, schools and local communities. For this, the short movie is being copied in DVD and share it with teachers of local schools.

¹ Alvarez, R. 2012. Estimating abundance of Marine Otter Populations (*Lontra felina*, Molina 1782) through Binomial N-Mixture Models from replicated counts in Southern Chile. Thesis MSc in Conservation Science. Division of Biology, Department of Ecology and Evolution. Imperial College London, 50pp.

- The information about abundance and presence/absence of otters has been share with local and regional authorities, mainly with professionals of the Environmental Ministry, who include in their database.
- Scientific information will be shared in academic meetings. It is considered show the results of the project in the Student Conference on Conservation Science, Brisbane 2013, Marine Mammals Latin American Congress 2013 and/or The International Otter Colloquium 2014.

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

This initiative has been carried out thanks to the support of the TRF and the RSG, so the time scale considers exclusively funds of the RSG.

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
Transport and Expeditions	£8,800	8,900	600	It has been used for office and for distribution of video to school and local government
Food and Meals	£600	£600	0	
Short movie elaboration	700			https://vimeo.com/50077744
Field equipment	£150	£150	0	
Research equipment	£1,500	£1500	0	
Office	£150	£150	0	
Total	£11,900	£11,300	Local exchange rate= £1: \$730	

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

In the opinion of the scientific group from the NGO the more important steps are the monitoring of the species, disseminate information about both otter species conservation and to protect through sanctuary or MPA the most important areas for the marine otter.

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?

The RSGF logo was used in all the scientific and politician meeting, where information about: Population assessment and conservation status of the marine otter (Molina 1782) and the southern river otter (Thomas 1902) in the islands and channels of southern Chile project was presented. Also the RSGF logo has been included in all the diffusion material linked with the project and the conservation research program of the NGO Conservation Marina. This included the social networks, web page of the NGO and vouchers, triptychs, etc.

11. Any other comments?

Our institution is very grateful with the support of The Rufford Foundation and RSGF, because without the support, this project could not have been carried out. Recently we have information relevant for the otter conservation in the south of Chile and we are the first institution in Chile that starting to apply innovative methods to study this interesting and threatened species.