



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	Gustavo Arnaldo Marás
Project title	The mammals on which jaguars prey and their relationship with conservation threats in the Yungas of north western Argentina.
RSG reference	16345-1
Reporting period	January 2015 – June 2016
Amount of grant	£4998
Your email address	gustavomaras@gmail.com
Date of this report	15-09-2016

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
The general objective was to evaluate the conservation status of mammalian prey of jaguars in three sites with different types of production management (with extensive livestock ranching, with forest exploitation and without any activity) of the current distribution of Jaguar in Yungas of Salta and Jujuy (Northwestern Argentine Yungas).		X		It was necessary to reorganise and specify this objective due to a combination of problems. During this work we prioritised sampling grids of large prey while currently we are working to finish some of the medium preys' grids. The main problem was to import camera traps because the Argentinian Government ordained an importation restriction thus the purchase was delayed. Moreover we had some climate difficulties (rising rivers) and lands owners' restrictions so in some cases the access to the selected sampling sites was almost impossible. To solve this problem we included another sampling site with a different and new situation regarding the three original ones.
to analyse the Richness and Relative Abundance in communities' mammalian prey in these selected sites with different types of production management		X		This objective is almost completed; we compared the community of mammals prey but only the biggest species in four sites and the medium-size species in two sites.
To analyse Habitat Use of the populations of the main prey in these selected sites with different types of production management		X		The same as the previous objective, we compared the habitat use of populations of mammals prey, but only the biggest species in four sites and the medium-size species in two sites.

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

During the past years, the Argentina currency (peso Argentino (ARS)) was devalued so each pound (GBP) cost between 13,80 pesos Argentinos (January 2015) and 20,13 pesos Argentinos (June 2016) (see table of variation of exchange values), at the same time the dollar cost between 8,20 pesos Argentinos to 15,10 pesos Argentinos. This situation combined with restrictions to buy dollars and equipment in foreign countries, led to get a reduced number of cameras and to delay their importation. It should be noted that cameras are fundamental to advancement of my work that is why that according to what I previously expose, I have decided to prioritise the progress of my work and install first the sampling grids for large prey and in a second place the sampling grids for medium prey. Moreover we had some climate difficulties (rising rivers) and lands owners' restrictions, so in some cases the access to the selected sampling sites was almost impossible. To solve these obstacles we included a new sampling site with a different situation to the three original ones.

Time period	equivalence GBP to ARS	funding RSG in GBP	funding RSG in ARS
Submission of the proposal (29/07/2014)	1 GBP = 13,88 ARS	4998 GBP	69385,23 ARS
Receipt of funds in Argentina (29/01/2015) and project start	1 GBP = 12,98 ARS	4859,23 GBP(The amount of funding began to decline by conversions and taxes)	63072,79 (This is the funding RSG after the change by the Bank of New York (pounds to dollars); then this amount of dollars were changed to pesos argentinos by the Banco de la Nacion Argentina. This amount of money include taxes paid on both banks.)

During the project (enero 2016)	1GBP=19.07 ARS	3307,43 GBP (This value is to get an idea of the devaluation of the original fund that I have received)	63072,79 ARS
Project Completion (junio de 2016)	1GBP=20.13 ARS	3133,27 GBP (This value is to get an idea of the devaluation of the original fund I received)	63072,79 ARS

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

a) We describe and compare the communities of large mammals prey on four sites with different types of land use through the estimation of relative abundance and richness at each site. While we did not complete the sampling to medium-sized mammals in some places, we generated information about the most consumed preys by jaguars in the region (large mammals). This information is available for decision-makers, National Parks Administration, environment ministry of Salta, managers of forestry companies and local communities.

b) We estimate the habitat use for the most consumed preys' populations by jaguar, the large mammal species. The variation in habitat use for each species between sites could give us an idea about the effect of different factors present in sites with different types of land use. This information is available for decision-makers in the region.

c) This project made possible the participation of park rangers, workers of forestry enterprises, students of agronomy and biology, people of local communities of Baritú and Lipeo and technical staff of the ministry of environment of Salta. It was given work to the field assistants who were in every campaign. Finally, through this project it was possible to me, perform and move on with the data for my doctoral thesis, which without this subsidy would have been very difficult to execute.



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

During the sampling campaigns we train local residents to operate traps cameras, maps and GPS management. Also, for all samples we hire local people as field assistants and hired their motorbikes and horses. In this way, we contribute to the local economy. In addition, I will send reports to the local communities of Lipeo and Baritú. Having quantitative information about biological diversity in their region is very important for local people because they needed this dates to planning the land use. It is especially relevant when they do productive activities into same protected area.

5. Are there any plans to continue this work?

I have plans to continue this work because, according to my doctoral thesis, actually I am finishing the sampling of medium-size preys and soon I am going to repeat the sampling scheme (two times more) in each location. Although the first year of sampling was slow and with many problems, the working system is already dynamic.

We already have much of the equipment, administrative sampling permits, and the necessary contact with the local people and we know better the sampling sites. This will expedite our work in the next stage.

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

We exposed some of the results in Argentina Meeting of mammalogy in 2015. The rest of the results will be shared this year in a conference (October), for which I am already analysing and processing the data. Also I gave technical reports of our work to the National Parks Administration, environment ministry of Salta, a forestry company and I will send reports to the local communities of Lipeo and Baritú and other forestry company involved. During sampling campaigns I had some meetings with the local communities from Lipeo and Baritú and the principal and teachers of the school in the region. I committed to return to give a talk to school children. Finally I will public the results in a scientific journal.

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

RSG was used over a period of time bigger than planned, covering from January 2015 to June 2016. We consider that the money was not spent according to what was anticipated in the project because some unexpected problems during the purchase of the camera traps (USA), as I repeatedly mentioned this caused a delay in the first and in the followings phases of our work. Moreover problems related to climate (rising rivers) and lands owners' restrictions in each selected site also caused that the progress of the project was slowed.

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
Vehicle maintenance, including oil and filter changes, shock absorbers, front axle repairs and associated labour expenses	£ 1114	£ 1056	£58	We prioritised the settlement of fundamental mechanical problems of the truck; the rest of the funds allocated for this item was used to cover other important points of the budget.
Fuel for field trips (£ 76.06 per trip)	£ 228	£452	-£224	The fuel price has increased and also we decided to make a couple of campaigns more than we had planned do.
Food for field trips (4 persons x 10 days x 3 trips)	£ 557	£742	-£185.	We spend more money than budgeted in food because we decided to make a couple of campaigns more than we had planned do.
Bushnell camera traps (15 units, £ 111.36 per unit)	£ 1670	£702	£968	We bought six cameras instead of 15, because the purchase and shipping costs increased from the moment that we made the original budget to

				the moment that we could buy them. In addition, the RSG funds we received in ARS were devaluated to a very quick rate. This led us to decide to purchase fewer cameras and spend more money on other important points of our budget.
Office supplies (paper, ink cartridges for printer, pens, pencils, field notebooks, etc).	£ 74	£102	-£28	Office supplies price has increased and also we decided to make a couple of campaigns more than we had planned do.
Charges for use of satellite telephone (fundamental for communication during field work)	£ 19	£19	£0	Using a satellite phone was fundamental for my campaigns because the sampling sites were far from the villages and there was no telephone signal.
Wages for field assistants, 3 trips x 2 assistants per trip (£22.27 per person per day)	£ 1336	£1989	-£653	We spend more than expected in wages for field assistants for three reasons: first we decided to make a couple of campaigns more than we had planned to do, second we had to rent their motorbikes and horses to get to the sampling sites, and finally the living costs increased by economic instability in Argentina.
TOTAL	£ 4998	£5062	-£64	

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

The next step we are currently running is to complete the sampling of medium-sized preys and then we replicate the sampling at each selected site. Following, we will share the results in conferences and scientific meetings and informative reunions with local people and park rangers.

On the other hand, we will continue with the research of other questions and/or knowledge gaps which appeared during the development of this project. For



example, we have already considered to analyse the puma's photographic registries to see if there is any relation between the presence of the puma and the jaguars, maps of distribution prey species, identification of areas of importance for prey mammals, etc. All these new questions will contribute to a better understood and conservation of the wild life and native forests.

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, of course. We use the RSGF logo in many occasions, in all notes to apply for permission sampling, in technical reports, in presentation to scientific meetings, in meetings with local people, etc.

11. Any other comments?

We carry out this project thanks to RSG grants by Rufford Foundation, because without this huge help this would not have been possible. The information generated by this project could be used in management and conservation plans of medium and large mammals and the Yungas forest in Argentina.