

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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<b>Grant Recipient Details</b>	
<b>Your name</b>	Bibiana Gómez
<b>Project title</b>	Effect of fragmentation on medium-sized mammals diversity and connectivity analysis at Three Quebrachos Forest, Central Sub-humid Chaco, Argentina.
<b>RSG reference</b>	14788-1
<b>Reporting period</b>	2014 – 2015
<b>Amount of grant</b>	£ 5985
<b>Your email address</b>	<a href="mailto:bgomezv@gmail.com">bgomezv@gmail.com</a>
<b>Date of this report</b>	9 -12- 2015

**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
1. Describe the medium-sized mammal's assemblage composition and structure in the Three Quebrachos fragmented forest.			X	I finished the fieldwork the last month. I detected 15 species of medium and large-sized native mammals and one exotic species of five orders and nine families.
2. Analyse the habitat use of medium-sized mammals in the Three Quebrachos fragmented forest.		X		I generated the landscape predictor's variables. I am processing the videos obtained and writing the results. This objective to be finished soon. I ran preliminary analysis using the Hierarchical Multispecies Occupancy approach.
3. Analyse the structural and functional connectivity of Three Quebrachos fragmented forest.		X		We made a map and described the structural characteristics of fragments (several indexes) and forest amount in the landscape with Fragstat. We process the functional vegetation index (EVI by MODIS) to get functional ecosystem types. We did preliminary maps of functional connectivity for three mammal species.
4. Designing a conservation landscape proposal for Three Quebrachos Forest fragments management and conservation.		X		We are using 1-3 results to carry out this aim. With our result we propose the technical aspect needed to keep up biodiversity in this agroecosystem in terms on species occurrence in relation to forest configuration and forest amount in landscape. In each fieldwork we interacted with landowners and shared the videos obtained in their fields to give the partial results. The landowners showed positive attitude toward our project. The information gathered gave value to the forest remnants for mammal conservation in a

				fragmented forest landscape. Our results are the first in this agroecosystem, and will be useful as source to new researches.
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

I made a change to the sampling scheme to optimize the effort and increase the covered studied area. We installed one camera trap per 100 ha of available forest. Each camera trap was left at each site for 50 days and then moved to other fragments. During heavy rains, was impossible to install the planned number of camera traps. However, it was possible to carry out the planned sampling effort, increasing the number of camera traps per trip (15 - 20). Another disadvantage that we had was the mobility. We had planned to rent a car for local mobility, but this only took place during the first trip because the budgeted costs of rent car tripled by inflation. So that on the first trip, we spent almost 20% of the total budget. For the following trips, I get help from the Agroveterinaria Langelloti with local mobility. I covered the cost of fuel.

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

1. Available information about medium-sized and large mammal species in an agroecosystem of Chaco without earlier description. We describe the mammal composition in forest fragments unknown before. It gave us the ability to create an updated distribution of some species and find the forest amount that the species needed in a landscape.
2. The study area covers 3648 km<sup>2</sup>, of which 665.4 km<sup>2</sup> (18%) is forested, with a large variation in the structural characteristics of fragments, such as size, shape and condition. The remaining forest configuration in the landscape seems to be related with occurrence of some species. By the connectivity analysis we identified which patches are critical to support connectivity as nodes in the landscape.
3. With the preliminary results, the amount of forest in the landscape is important for the anteater occurrence. The anteater has the greatest requirements of resources and it was categorised as vulnerable. For the other species, the analysis is not ready.
4. We get publishable scientific information. The information will be available and I will send it to the local natural resource agencies to contribute to the land use planning.

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

Landowners were widely linked at work and were willing to take part and collaborate from submission of the proposal. They always had a positive attitude. Their collaboration was permanent, by contact with other producers, logistic facilities, and contact with local media (magazines, newspapers, radio programmes).

Several landowners cooperated with the project and during several meetings we selected areas for sampling using the study area map that I developed. Through the original cooperating landowners I was able to contact other owners and to date I have 20 landowners who have granted permission to work on their properties. In all cases, I had a positive response from the landowners, and in some cases, they went with me during the camera trap installation.

The fauna found in the forest fragments positively surprised most landowners. These results increased the value of this forest fragments for biodiversity conservation in these agroecosystem.

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

The main plan to continue this work it is monitoring the forest loss and the population trend of key mammal's species.

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

- A presentation made in a National Congress (Argentinian Conference of Mammalogy. 4-7 November 2014 in Esquel. GÓMEZ B., THOMPSON J. y J. ADÁMOLI. 2014. Medium and large mammal diversity in forest fragments, Campo Plata Agroecosystem- Chaco.). We will present the detailed result in others national and international congress.
- I selected the videos with mammal detections for each property and made a CD to give them to every landowner who has allowed me to work on their property. For those without access to a computer I provided them the printed photos.
- I am developing a brochure and a summary video of outreach to share on social networks and contacts made in the area as well as local media.
- I share the project and preliminary result in local media throughout a Special section in the "Nuevo Siglo" magazine (<http://www.revistanuevosiglo.com.ar/revista-agropecuaria-nuevo-siglo-131-mayo-2015.php>) and a local TV programme in the "ROCA TV and Radio" (<https://www.facebook.com/La-Roca-Tv-y-Radio-1443925752528245/timeline>).
- I will write an article about main results and general insights about the value of forest fragments for biodiversity conservation in peer-reviewed journals.

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

I have a delay in my Rufford project and other deliverables/reports plan, because I had a car accident. The field activities were developed from December 2014 until October 2015, because of logistical difficulties. During the current year I finished the fieldwork of my project.

**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
Hostelling and food: 8 trips	900	1800	900	
Bus tickets to Chaco	1300	2800	1500	
Rental car to field work	1250	1250	0	
Fuel	500	1200	700	The difference was used from the "Rental car" Item
Camera traps	1500	4500	3000	
Workshops	0	400	400	
Batteries and lures	0	1000	1000	
Dissemination	250	250	0	
Contingency	285	285	0	
<b>Total</b>	<b>5985</b>	13485	7500	The difference was covered by personal funds.

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

Increasing the value of forest fragments to keep the forest amount in the landscape. Preliminary results are amazing, as this agricultural landscape maintaining high diversity, for which, all forest fragments acquire high conservation value. It is a priority promote the maintenance of forests to conserve remnant patches biodiversity in the long term.

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

I used the RSGF logo in all oral and written presentations.

**11. Any other comments?**

I am extremely thankful for having received the grant to support my project from the Rufford Foundation. Thank you so much. This project would not have been possible without this support.