

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	Jessica Castro-Prieto
Project title	The Effect of Habitat and Landscape Characteristics on Mammal Species Richness, Composition and Distribution in a Fragmented Landscape in Northeast Uruguay.
RSG reference	21.06.07
Reporting period	Final report
Amount of grant	£4961
Your email address	chechiasp@gmail.com
Date of this report	April 18, 2009



1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

	Not	Partially	Fully	
Objective	achieved	achieved	achieved	Comments
To improve the			х	We conducted medium and large mammal
information about				surveys from January 2008 to January 2009.
the community of				Twelve camera-traps were deployed for a year,
medium and large				documenting a total of 10 families
mammals inhabiting				(Didelphidae, Dasypodidae, Canidae, Felidae,
a subtropical forest				Mustelidae, Caviidae, Procyonidae, Cervidae,
in Uruguay				Suidae, Leporidae) and 12 species of
				mammals: the white-eared opossum (Didelphis
				albiventris), nine-banded armadillo (Dasypus
				novemcinctus), the crab-eating fox (Cerdocyon
				thous), the pampas fox (Pseudalopex
				gymnocercus), the Geoffrey's cat (Oncifelis
				geoffroyi), the hog-nosed skunk (Conepatus
				chinga), the capybara (Hydrochoerus
				hydrochaeris), the coatimundi (Nasua nasua),
				the crab-eating raccoon (Procyon cancrivorus),
				the brown brocket deer (Mazama
				<i>gouazoubira</i>) and the exotic species: wild boar
				(Sus scrofa) and the European hare (Lepus
				europeus).
To gather			х	The species with the greatest relative
information about				abundances was the brown-brocket deer (32.5
mammal species				% of the total 24-hrs photographs) followed by
richness and				the crab-eating fox (32%), both detected in all
composition as well				the study sites (n=30). The rarest species were
as a good estimate				the capybara, the pampas fox and the
of species				European hare with relative abundances of
abundances using				0.18%, 0.37% and 0.75 % respectively.
camera-traps				
To improve the			х	We collected data on vegetation structure
information about				(vegetation layers), trees DBH, canopy
the type of habitats				coverage, ground coverage, tree species and
used by mammals				slope as well as temperature and relative
at the local scale (in				humidity in each site (n= 30) where camera-
different locations				traps were located. Land cover was calculated
within the forest)				in ARC GIS/Arc Info using a 2007 Aster image
and at the				of the area. A buffer analysis (100m, 200m,
landscape scale				500m, 1km, 5km) was conducted to calculate
				the area of forest and pastures around each
				site.



To seek for the involvement and support of local people in the conservation of wild mammals		x	Local people got involved and collaborate in many stages of the project. They collaborated in many activities, from logistical to technical support during field work.
To contribute to the establishment of a protected area in this subtropical forest	x		Currently, there is a plan to include Valle del Lunarejo within the National Protected Areas System. A report about the project's results will be send to the National Environmental Agency (DINAMA) as another document to support the establishment of the protected area

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

The protected areas in Uruguay have been always received minor attention by the government, so, the first difficulty was at the beginning of the project when we had to "convince" local people about our good intentions for the area. When we first visited Valle del Lunarejo, the local people though we were governmental employees so, they showed very incredulous and we had to explain many times that this project was fully supported by international funds. After some weeks of our stay in the town next to the study area, people start coming to ask us about the project. Every evening, people were coming to the guest house where we stayed, to see the photographs of the animals and to hear about our daily experiences. Even hunters came to offer their services as guides. Some landowners, who were known for having a "strong temperament", invited us to their ranches to drink "mate" and to tell us their stories, some asked us to print the photos, and everybody asked us to help them in preserving the area. Therefore, after a month the locals were very receptive and kind with us. It was a great feeling to see how we were able to provide hope to the locals, which really wants to protect this natural forest.

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

- a. This work is the first long-term mammal survey in Uruguay. We generated a reliable description about the medium and large mammal community inhabiting one of the largest sub-tropical forests in Uruguay. We strongly believe that this project represents the most empirical and reliable source of information to support the establishment of a protected are in Valle del Lunarejo.
- b. The project results have important implications for the conservation of Neotropical mammals. For example, coatimundis (*Nasua nasua*) whose southern limit distribution is in the north of Uruguay, were documented in 15 of the 30 surveyed sites. The Geoffrey's cat (*Oncifelis geoffrogy*) classified by IUCN as a Near Threatened species was documented in 8 sites, and the brown brocket deer (*Mazama gouazoubira*) classified by IUCN as Data Deficient species was documented in all the sites. For both coatimundis and deer, we identified individuals of different stages which could be indicating the presence of a healthy population within the area.



c. By the use of camera-traps we improved the current information not only about the species composition inhabiting Valle del Lunarejo but also about species relative abundances, habitat use and activity patterns.

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

Local people support was essential for the accomplishment of the project. The complete forest is a private property that belongs to approximately seven land owners whose property boundaries are represented by the natural forest. So, we required their authorization to get into the study sites located along the forest. Particularly, a local family was completely involved in the project participating from the habitat characterization, to the camera traps-survey. In addition, they gave us logistic support such as lodging and "baby-sitting" of my two year old daughter.

A short-term benefit of the project for the local community is the gathered information about wild boar that can be used for the management and control of this exotic species in the area. Wild boar are the main cause of large economic loss in this area since they are important predator of lambs during birth periods and therefore cause negative economic impacts in the local families. Through camera-traps we obtained information about wild boar abundance, activity patterns, and the most "visited" sites by this species. This information could be used to allocate wild boar traps and to improve the efficiency of hunters.

A long-term benefit is regarding the creation of a protected area. We believe that this project will accelerate the legal protection of this area that would have many positive benefits for local people. For example, an important consequence of the protected area would be to increase the involvement of local people in conservation actions that at the same time would generate additional benefits such as ecotourism throughout the year. Ecotourism would contribute to local family's economy particularly during drought periods when their current incomes (e.g., cattle raising, agriculture) are weakened. Another benefit from the creation of a protected area would be through tax exoneration or the development of more flexible laws for those landowners who contribute to the conservation of this natural forest.

5. Are there any plans to continue this work?

Yes, there are. Particularly, we would like to develop a long-term population and genetic study of the Geoffrey's cat (*O. geoffroyi*) to assess its population's status in Uruguay in a way to develop a regional conservation strategy for the species. The assessments conducted in Argentina, Bolivia and Brazil indicates that the populations of Geoffrey's cat are decreasing in their whole distribution. So, we believe it is of paramount importance to assess the status of Geoffrey's cat in our country.

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

The results will be disseminated through my thesis dissertation (May 2009) and scientific publication, symposiums, presentations in local education centers and local newspapers



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

The RSG was used from December 2007 to December 2008. This period coincides with the one established in the original proposal.

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	Actual	Difference	Comments
	Amount	Amount		
P.I. per diem and	1254	1000	254	Food was cheaper than expected.
lodging				The positive balance was used for
				car rental and gasoline.
Field assistant per diem	752	500	252	Food was cheaper than expected.
				The positive balance was used for
				car rental and gasoline.
Car rent and gasoline	1504	2260	-756	In the original proposal we
				calculated approximately 125
				litres/month; however, we used
				approximately 188/month.
Camera-traps and hobo	1200	1200	0	
data loggers				
Miscellaneous	250	0	250	Miscellaneous budget was used for
				gasoline and car rental
TOTAL	4960	4960		*1 USD= 1.99410 £

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

An important next step would be to design more specific projects for the conservation of particular species inhabiting this natural forest. Specific project would provide more detailed information about species home ranges that could be used to select the shape and the size of the protected area as well as to address the most important threatens for the species. For example, through our community survey we were not able to determine if cattle represented a negative impact for wild mammals. However, through detailed studies more straightforward management actions could be conducted to achieve the conservation goals of the area.

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, I used the RSGF logo in many opportunities at University courses. Also, I will use the logo during my thesis dissertation in May 2009.