

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	Juan Luis Peña-Mondragon
Project title	Evaluation of livestock depredation by jaguar (<i>Panthera onca</i>) and other large carnivorous mammals in southern “Gran Sierra Plegada”, Nuevo Leon, Mexico
RSG reference	8851-1
Reporting period	23 rd Nov 2011 – 19 th Dec 2011
Amount of grant	£6,000
Your email address	jlpena@oikos.unam.mx , jlpena_mondragon@yahoo.com.mx
Date of this report	January 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
Estimate of the damage caused to livestock by carnivorous mammals			X	We succeeded in assessing damage caused by jaguar and other large carnivores on domestic livestock and related results to impact on rural families. This is the first evaluation conducted in northeast Mexico. Specific locations were identified where the conflict between large carnivores and people are stronger.
Recommendations for the design of interventions (policy formulation, education, work with different organisations) that could help mitigate the conflict		X		We conducted workshops in rural communities identified as most at risk. We work with attendees in order to identify ideas and possible lines of work to develop community conservation programmes that favour maintenance of jaguar and other large carnivores.
Workshops for presentation of the results to the communities and authorities			x	We succeeded in gathering the principal government agencies and NGOs involved in wildlife conservation issues.

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

At the start of field work with the rural communities it was difficult to approach them and to build confidence. Because the jaguar is a species under severe protection by Mexican law and sanctions can go up to 9 years in prison if killing an individual, rural people denied the presence of the species in the area when firstly asked and denied also having a conflict with livestock. Faced with this problem we change our work design and went for a different strategy. We contacted Municipal Livestock Associations (Asociaciones Ganaderas Locales) in the two municipalities of work: Aramberri and General Zaragoza. Before the General Assemblies of these Associations we presented the project and explained the objectives of our work and requested their help voluntarily. We made clear that the project belonged to the university, that we were not government officials and that we had no financial support or compensation programmes. Through this new approach we raised a list of farmers/ranchers and communally landowners (ejidatarios) affected not only by jaguar but also by black bear, cougar, bobcat and gray fox. This way allowed us to obtain a broader view of the conflict in various locations in both municipalities and to identify farmers and ejidatarios willing to collaborate with the project.

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

1. The first assessment of damage caused by jaguars and other large carnivores on domestic cattle in the southern state of Nuevo Leon, Mexico. We also identified the main locations where the conflict between the jaguar and rural people is stronger. These diagnoses have implications for conservation efforts and specific government actions.

2. We conducted the first workshops in rural communities having conflicts with jaguar and other carnivores and through presenting the results of the project we could also get their impressions as groups and to explore into the solutions to the conflict.

3. Through the project we brought together State and Federal authorities and non-governmental organisations of the state of Nuevo Leon with the aim of updating them on the conflict between jaguar and other carnivores and people's domestic livestock. Some acknowledged that they did not have or know any data regarding the conflict. The workshop was also useful to understand their position and their lines of work and to start thinking together proposals for the affected rural communities and to develop community conservation plans.

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

As mentioned before, it was difficult to start the project due to the delicate subject matter: the conflict between jaguars and other carnivores and rural people. After modifying our work approach we think we succeeded in promoting people's interests and participation in the project. In the communities we could find people who trusted us and were guides who helped in field trips. This was very good because we could obtain direct evidence of damages. The snowball method was useful to indentify and talked to key informants who are directly involved in the problem.

It should be noted that one of the main benefits is that communities already have a diagnosis of the problems of predation of their livestock caused by jaguar and other carnivores. That people have information is important when seeking government assistance to face the conflict.

Indirectly, the funding was used for lodging, food and an important part of fuel was bought directly in the community or municipalities bringing an economic benefit in the communities. Also during the workshops in the communities we hired women for food preparation offered after each workshop, in addition to hiring guides and field assistants.

5. Are there any plans to continue this work?

Yes, from this project several lines of work could be developed: 1) to establish a permanent monitoring system of damages caused by jaguar and other carnivores (monitoring not only effect on domestic animals but on other resources such as crops, caused for example by bears or foxes), 2) to understand in a much deeper way the way people manage their domestic animals (it was observed that many animals are left free in the wild without assistance), 3) to promote the conducting of biological and ecological studies of jaguar in order to identify which aspects can detonate predation of domestic animals and 4) to continue, reinforce and multiply community work though environmental education and communication activities that promote peoples involvement in

construction of solutions that mitigate or solve the problems they have with wildlife. It is extremely important to raise awareness among people (children and youth as fundamental targets) of the ecological relevance of wildlife. What may help mitigate the conflict is a mixed strategy that combines finding alternatives in the management of natural and domestic resources, involvement of governmental and non-governmental organisations and through local participation.

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

For the rural community level, we produced a leaflet with the project’s results. This was designed in a way that allows easy reading and included mention to the participation of the different communities. These leaflets were distributed in workshops, the Livestock Associations and some were given to key people to distribute them also.

At each workshop, in the communities, the Municipal Associations and the workshop with government officials and non-governmental organisations, results were also presented.

In the academic sector, the results have been presented at various national and international conferences specialised in environmental issues (III Mexican Ecology Congress; Aberdeen Meeting on Environmental Conflicts). We also organised a symposium on the human-carnivore conflict at the Ecology Congress. This was very good in order to establish contact, know the work and started to share our results with researchers working in the same line of work. We are also preparing publications for national and international journals to share the most relevant results of the work. It should be noted that in each of these activities we have given the proper acknowledgements to the Rufford Small Grants Foundation.

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

The project was initially considered to be completed in 12 months. Due to the weather and conditions in each of the communities, it was not possible to make the community workshops in the times initially planned and consequently we had a delay. This also produced a delay in organising and conducting the workshop that with the authorities and with non-governmental organisations. The total project time was then thirteen and a half months.

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
1 field assistant in Aramberri or Zaragoza (8.035 £ per 50 days in one year)	401	396	-5	Conversion into pesos is a small difference of 5 pounds
1 Digital camera: Nikon D5000 Lente 18-55mm Vr Live View 12 Mpx	696	739	43	The price indicated in the initial proposal due to change product distributor.
Fuel for field work for 60 days (24.22 per day. 5 trips to 12	1453	1504	51	The difference stems from the performance of the

days, Morelia-Nuevo León-Morelia, in one year)				vehicle under various conditions and uneven terrain.
Accommodation in field work in Aramberri and Zaragoza, Nuevo Leon for two persons (22.24 per day, 50 days in one year)	1112	1187	75	There was the need for extra nights of accommodation in hotels due to matters outside our control and for the benefit of the project.
Food for field work in Aramberri and Zaragoza, Nuevo Leon for two persons (15.98 per day, 50 days in one year)	799	844	45	The difference derives from the length of stay in the field.
Fuel for workshops for 12 days (24.22 per day. 4 trips to 3 days, Morelia-Nuevo León-Morelia, in one year).	290	422	132	They spent the extra £ 132 because there was the need for invitations to communities that were not covered but that are important.
Food for workshops in Aramberri, Zaragoza and Monterrey Nuevo Leon for two persons (15.98 per day, 12 days in one year)	383	396	13	The difference is the price change of products purchased.
Accommodation for workshops in Aramberri Zaragoza and Monterrey Nuevo Leon for two persons (11.12 per day per person, 12 days)	383	343	-40	Are spending less because we use hotels that offer improved.
70 disposable cameras kodak (5.356 £ per unit)	374	343	-31	The deficit was spent on gas to bring the invitations of each workshop
Paper, ink, spiral notebook, maps, pens, markers	109	185	76	Print maps to give to the communities.
TOTAL	6000		6359	We had a deficit of £ 359, which was covered by the National Autonomous University of Mexico

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

We plan to apply for a second RSGF grant, in order to continue the work and strengthen the relationship with communities and other stakeholders already involved. We wish to work along the following lines:

a) Continue working with rural communities and Local Associations in order to monitor and obtain more data on damages which could be used for future implementation of a programme of conservation of the jaguar and other large carnivores in the southern state of Nuevo Leon, Mexico.

b) Characterize livestock management in order to know its role as a risk factor or trigger for domestic livestock predation by jaguar and other large carnivores.

c) To address environmental issues at the school system working with teachers and establishing also educational programs with NGOs. We are in close contact with the governmental agency in charge of primary education in very small rural communities where there is no school. This agency attended one our workshops and they are interested in working with us to multiple efforts that help environmental awareness about the jaguar by rural dwellers.

d) Start with the study of various aspects related to the biology and ecology of the jaguar and other large carnivores such as: natural prey availability, quality and availability of habitat, population densities, among other aspects.

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?

RSGF logo was used in each of the materials produced and distributed during the work, such as progress reports, presentation brochures and final reports to communities, in invitations, and the maps we use for the work (see Figure 1).



The logo was also used in each community presentations, workshops and academic meetings in which we present the project. And it is still used on every occasion in which the data or project are presented (Figure 2).

Human-jaguar conflict in northeast Mexico: analysis of economic losses, peoples' perceptions and knowledge of the species and construction of conservation strategies.

Rufford * * * Laboratorio de Comunicación para el Manejo de Ecosistemas - Centro de Investigaciones en Ecosistemas Universidad Nacional Autónoma de México
Contact: jlpena@ikos.unam.mx and jlpena_mondragon@yahoo.com.mx

Peña-Mondragón, Juan Luis and *Castillo Álvarez, Alicia

INTRODUCTION
The decline of large carnivores in populations of the world has several causes: Increase of Human population, habitat loss, land use change and hunting of the species and their prey. In Mexico, the historic range of jaguar has decreased in more than 70%. The Sierra Plegada in the state of Nuevo Leon has become an isolated area where jaguars have been little studied.

OBJECTIVES
a) To assess the economic damage produced by jaguars on cattle herds and b) To understand peoples' perceptions and knowledge of the species. Final end is to contribute to the construction of strategies and practices that mitigate and help solving the conflict.

Research Methodology
We worked in two municipalities in southern Nuevo Leon: Aramberri and Zaragoza. A total of 60 locations were visited and 80 families interviewed over a period of 3 years.

We used a qualitative research approach in order to obtain information from social actors perspectives. A survey was used to collect data regarding damages on livestock predation. Interviews were used to obtain perceptions, knowledge and attitudes about the species.

Study area
We worked in two municipalities in southern Nuevo Leon, Mexico. Both present in the Sierra Madre Oriental. We visited a total of 60 locations with 80 respondents in a period of 3 years (Figure 1).

METHODOLOGY



Figure 1. Study area

a

TALLER
Carnívoros - Ganado
Trabajando juntos
para encontrar soluciones

Juan Luis Peña-Mondragón
Alicia Castillo Álvarez

Centro de Investigaciones en Ecosistemas
Universidad Nacional Autónoma de México



b



This work is the first of its kind in the southern state of Nuevo Leon, Mexico, and it could be said that one of the first in Mexico where the aim was to document the conflict human - carnivores from the perspectives of rural people. Until today there are still very few studies that address such problem considering the views, problems and opinions of local peoples. It has been proven that for more effective conservation the local land owners and residents of the land should be taken into account. Understanding how they see and understand conflicts is a very relevant step towards the conservation of ecosystems and their species, especially species in danger of extinction such as jaguar in Mexico.

This work would not have been possible without the help and cooperation of many people, to whom I thank.

Our team: Alicia Castillo (Research advisor and tutor), Lucía Martínez, Erika de la Peña, Rafael Lombera, Coral Mascote, Sofia Monroy, Jonathan Antonio, Marion Riensche, Norman Sánchez and Julio C. Gallardo.

Our partners for the workshop in the city of Monterrey, M. in C. Nelly Correa, Coordinator of the "Research Chair Andrés Marcelo Sada from the Instituto Tecnológico y de Estudios Superiores de Monterrey."

Professor Leoncio Reyna, Guillermina Serrato, MVZ Jorge Grimaldo for all their support and commitment to help during fieldwork and the project and who love the Grand Sierra Plegada and its inhabitants

The presidents of the "Local Livestock Associations" of the municipalities of Aramberri and General Zaragoza, NL, Erasmo Cerda, Javier Medellín respectively.

A municipal, state and federal government for all their support.

All Ejido Commissioners who welcomed us into their communities.

Finally and the essential parts of this project: all the inhabitants of the Great Sierra who supported us as only they can do.