

The Rufford 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	Hansel Herrera
Project title	Jaguar Hunting Behaviour: Effects of Prey Availability and Human Activities in the Guanacaste Conservation Area, Costa Rica
RSG reference	180211
Reporting period	December, 2016
Amount of grant	£4880
Your email address	bluecloudcr@gmail.com
Date of this report	14/12/2016

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
Describe activity patterns of jaguar				Need to sample other areas of the park, other than the coastal forests.
Determine prey influence on jaguar activity patterns				Need more data on both marine turtles and terrestrial prey, especially during the dry season.
Determine human impact on jaguar activity and sea turtle predation				Need more information from areas of the park where humans are not allowed and more sampling time.

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

The two radio-collared jaguars moved constantly in and out of our study area, making it almost impossible to keep a close eye on them. Besides, the rugged terrain made it very difficult for us and for the satellite to connect with the jaguars via GPS or VHF transmitting-receiving systems. We used randomly distributed camera traps as a backup methodology.

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

1. A description of the general activity patterns of the jaguar, its terrestrial prey and sea turtles.
2. An insight into the relative importance of terrestrial vs. marine prey in the diet of jaguars (based on their influence on the jaguar's behaviour).
3. Evidence of the negative impacts of human presence (touristic activities) on the activity patterns and hunting behaviour of jaguars in the area.

All of this was presented to the scientific community and the national park personnel in the form of a thesis and will be published online very soon.

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

The result of this investigation could be used to develop a sound touristic initiative based on the observation of the jaguar, its prey (lots of sea turtle carcasses!), etc. in order to improve the livelihoods of the local communities. But no such thing exists as of today.

5. Are there any plans to continue this work?

Yes. The research project hasn't stopped.

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

I intend to publish the results in an international scientific journal and to make posters to inform the park visitors about the jaguar-sea turtle relationship in the Guanacaste Conservation Area. I have already orally presented the results of my investigation at my university and at the park.

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

It was spent during the second semester of the project (December-June) as the money arrived a little bit late. But all funds were wisely and entirely used on the research 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
Housing	768	768	0	
Food	768	768	0	
GPS Locations	1280	162	1180	The rest of the money was spent on camera traps to survey the activity of jaguars and its prey.

Gas	365	365	0	
Salary	1536	1536	0	
GPS	128	128	0	
Batteries	6	6	0	
Field Notebook	16	16	0	
Plastic Bags	3	3	0	
Lantern	10	10	0	
TOTAL	4880	3700	1180	

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

There is an urgent need to regulate the access of the public to the beach at night, as they are interfering with the predation of sea turtle by jaguars. The park authorities have been informed of this situation and should take actions to protect the fragile population of jaguars at the GCA.

An in-depth analysis of the diet of jaguars (scat analysis) is needed to understand the proportion of the jaguar's diet made up of terrestrial prey and sea turtles.

A permanent jaguar-sea turtle research project is needed to understand the potential impact of jaguar predation on the local populations of sea turtles, especially the green and hawksbill turtles, which are both very endangered.

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 publicly thanked the RSGF at the end of my thesis defence and at other oral presentations of this work I have offered. I also thanked the RSGF in the thesis manuscript and in a couple of publications that have already come out of this research.

11. Any other comments?

This grant was a real blessing for my research project. It made it possible to continue with the project for the time length originally planned and to activate the emergency plan which allowed me to fulfil my duty despite the difficulties found on the way. Thank you very much!