

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	Andres Link
Project title	Effects of Fragmentation on the Behavioral Ecology, Stress Levels and Parasitism in the Brown Spider Monkey (<i>Ateles hybridus</i>) in Colombia
RSG reference	11097-2
Reporting period	Final Report – May 2013
Amount of grant	£5578
Your email address	a.link74@uniandes.edu.co
Date of this report	23 rd May 2013

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
Data collection on the ecology and behavioural ecology of two populations of brown spider monkeys with contrasting habitat characteristics.			√	We completed another year of data collection at San Juan de Carare and re-started the long term study at Las Quinchas.
Estimation of fruit availability and phenological patterns at both study areas.			√	
Collection of faecal samples and field extraction of glucocorticoids at both study sites			√	
Collection of faecal samples for parasitological studies at both study sites			√	
Building local capacity and training of young biologists in Colombia			√	During this project we were able to provide the opportunity for four young researchers and students to be trained in field primatology and conservation. David Gongora collected data for his master's thesis and Gabriella Robayo, Nathali Diaz, and Norma Lopez completed their field work towards their undergraduate degrees in biology.

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

Fortunately, we can say that there were only minor difficulties that emerged during the project's duration. Probably the most relevant issue was the difficulty to obtain long behavioural follows of our study group of brown spider monkeys at one of the study sites, given the extremely broken terrain and the fast movement of spider monkeys through the forest canopy. This imposed an initial challenge to obtain faecal samples frequently from our study animals, but with time this challenge became almost negligible as field assistant became proficient with keeping track of the study groups.

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

First, the successful collection of samples for conducting the hormonal and parasitological profiles for our study animals will allow us to run the laboratory analyses needed to answer the research questions on the effects of habitat fragmentation and resource availability on the parasitic loads and stress of brown spider monkeys. Also the successful data collection throughout the study will also allow us to evaluate the temporal variation in hormone levels (stress) and parasitic loads within each of the study sites and thus, correlate it with environmental and socio-demographic variables. In short, we have successfully completed the field data collection and biological sampling to build on our current understanding of the proximate effects of habitat disturbance and fragmentation on the biology of brown spider monkeys.

Second, we have been able to give continuity for our long term projects on brown spider monkeys in Colombia. To date, we have completed 5 years of continuous data collection on two groups of brown spider monkeys at San Juan de Carare, and we re-started the study at Las Quinchas, completing our 4th year of behavioural studies at the site. More important these long term data has allowed us to record in detail several years of demographic monitoring of these endangered primates. This is the only natural dataset on the life history variables and population biology of this endangered primates and thus it is key to maintain it in order to obtain data on the life cycles, survival, mortality, etc. of these primates and better understand their extremely long development cycles.

Third, we were able to train several additional students in field primatology and conservation in Colombia, some of them who will begin graduate studies at Universidad de Los Andes in Colombia working towards the conservation of endangered primates and ecosystems. Finally, this study will not only provide very relevant data for structuring successful conservation plans for one of the most endangered primates in the world, but has also continued to raise local, national and international awareness on the threats these primates are currently exposed to. By completing the data analyses and reporting of the current study, we will have a more comprehensive understanding of the effects of habitat disturbance on brown spider monkeys, which we aim to direct towards raising awareness for the urgent need of successful conservation initiatives towards their remaining populations.

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

In this project, the local community was not involved directly. Nonetheless, we have continued to work with the local communities with periodic workshops and the strengthening of the “Ecological Club” at both study sites, which has become very well accepted by most kids and teenagers in the local villages. Also, we have continued to raise awareness on the threats these primates and the ecosystems they live face, through several activities including a “brown spider monkey” festival done in the vicinity of San Juan de Carare with the local community.

5. Are there any plans to continue this work?

Yes. Our goal is to continue with the long term study and conservation of brown spider monkeys. For this, we first plan to give continuity to the work done at San Juan de Carare and Las Quinchas focused on gathering field data on this primate populations. Second, we are becoming every day more involved in jointly promoting plans for the conservation and sustainable development of the Magdalena River basin as a regional strategy to conserve the lowland inter-Andean forests and the biodiversity contained therein. Thus, we feel very committed to continuing our local work with

brown spider monkeys and a broader approach to the regional conservation of some of the most threatened ecosystems in the Neotropics.

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

We plan to share the results of this study with the scientific community through the publication of at least two peer-reviewed manuscripts related to stress and parasitic profiles of brown spider monkeys living in fragmented and less intervened areas.

Also, we will include the most relevant results obtained in this study in the development of the National Action Plan for the conservation of brown spider monkeys which will be launched in the next months by the Colombian Primatological Association.

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

We used the RSG funds from Jun2012 through May 2013, in a slightly shorter time schedule to the anticipated length of the 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
Transportation Bog-Quinchas-Bog	420	450	+ 30	We covered the costs of 9 roundtrips to the field site at approximately £ 50 per person.
Living Expenses for Students	3750	3764	+ 14	We covered the station fees for 2 students at Las Quinchas for 300 days at approx.£ 6 per person per day (as we received a special fee for researchers that was roughly half of the anticipated cost)
Living Expenses for PI's	563	364	- 199	We covered the station fees for a PI at Las Quinchas for 60 days at approx.£ 6 per person per day
Materials	490	600	+ 100	
Equipment	355	400	+ 45	
TOTAL	5578	5578		

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

We consider that it is very important to continue with the long-term monitoring of brown spider monkey's populations in order to better understand the effects of fragmentation on key elements of their biology, such as survival, life tables, inter-birth intervals, age at first reproduction, lifetime reproductive success, etc. These data are key in order to better understand how fragmentation affects brown spider monkey populations.

Also, there is a need to begin studying populations of brown spider monkey in habitats with minor or no intervention in order to better understand the baseline strategies of their behaviour and ecology,

and how they change under different scenarios of pervasive fragmentation and other threats such as hunting and pet trade.

Finally, there is an urgent need to develop the Conservation Action Plan for brown spider monkeys in Colombia, as this exercise would bring together scientists, government agencies and other stakeholder in order to set nation-wide initiatives for their conservation.

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?

We have not yet used the RSGF logo as the results of our work are still in progress.

11. Any other comments?

Finally, we express our gratitude to RSGF for providing the funding for this 2nd RSG which has allowed us to progress in our research and conservation efforts towards protecting the remaining populations of brown spider monkeys (*Ateles hybridus*) in Colombia.