

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	Gaius Wilson
Project title	A study of <i>Lantana</i> and its impact on elephant foraging behaviour in the Nilgiri Biosphere Reserve, South India
RSG reference	Rufford Small Grant 19.12.06
Reporting period	
Amount of grant	£5000
Your email address	gaiuswilson@hotmail.com
Date of this report	

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
Mapping the extent of spread of <i>Lantana</i> within major vegetation types and evaluating its impact on plants that elephants feed on (grasses, browse)		Yes		Field work currently being conducted
Evaluating changes in foraging behaviour of elephants brought about by <i>Lantana</i> invasion (comparing earlier data)		Yes		Field work currently being conducted
Evaluating the impact and cost effectiveness of <i>lantana</i> removal using different methods [excavator, cutting, uprooting by captive elephants and salt water spray on leaves to kill <i>lantana</i>], monitoring survival and regeneration of <i>lantana</i> and native species in cleared patches.		Yes		Field work currently being conducted

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

While writing the original proposal, it was my intention to study only the foraging habits of wild elephants. However, I quickly realised the benefit to the study of being able to control the habitat in which domestic elephants feed and to be able to observe them more closely. Thus, I expanded the study to include an experimental study with domestic elephant and to complement the observational study with wild elephant.

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

As the field work is still underway, I am yet to provide evidence of changes in the feeding behaviour of elephants and the effect of *Lantana camara*.

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

I have hired tribal trackers to track and observe elephants and assist me with my vegetation surveys. This provides them employment and salary during the course of this project. I have also used tribal elephant keepers for a large part of my work. I hire and pay the elephant keepers to take their elephants to specific places in the forest so I could observe and record the elephants' feeding behaviour in different levels of *Lantana* infestation.

5. Are there any plans to continue this work?

Yes, this work is part of my Ph.D. data collection which I intend to carry on until the completion of my Ph.D. as of now at least until May 2010.

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

Over the last two years, I have made several power point presentations to various school and college students explaining my work, the objectives and outcomes of this research project. Some include Veterinary students from Michigan State University, USA (July 2007) in Mudumalai Tiger Reserve, India, title "Camera trapping at Bandipur Tiger reserve" also funded by Rufford Small Grants for nature conservation.

Hebron International School (Class 2 and class 13 biology students) Ooty, India (July 2007), title "Elephant ecology and weed invasion in Mudumalai Tiger Reserve"

Sarla Birla school, Bangalore, India (June 2007), title "elephant ecology in Mudumalai and weed invasion in the upper Niligiri plateau, Avalanchi"

Valley School, Bangalore, India (July 2007), title "Camera trapping at Bandipur Tiger reserve" also funded by Rufford Small Grants for nature conservation.

Trainee Range Forest Officers, Eastern Forest Rangers college, India (August 2007) in Mudumalai Tiger Reserve, India, title "Introduction to Mudumalai and the problem of weed invasion"

Wellington Girls college, Wellington, New Zealand (Sept 2008), title "Elephant ecology and weed invasion in Mudumalai Tiger Reserve"

I will continue to do this. By the end of my study, I will provide a complete report to the Tamil Nadu state Forest Department which manages all the forests in the Southern state of Tamil Nadu in South India. The Tamil Nadu Forest Department also grants me the required permission to carry out this research project. Management recommendation will be submitted to the concerned officers. I will make presentations of my research work to forest officers and staff who are responsible for tackling this issue. This work will also lead to my obtaining my Ph.D. thesis from Victoria University of Wellington, New Zealand. For this I will submit a thesis and write manuscripts with my supervisor and publish my results in peer reviewed journals.

I also plan to attend the 10th International Congress of ecology in August 2009 that will be held in Brisbane to present the results of my findings.

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

The Rufford Small Grant was used between July 2007 - October 2007 and October 2008 to present and until May 2009. This is a continuous study, but I was away in New Zealand registering my Ph.D. and developing my proposal with my supervisor. The actual length of the projects data collection will end in May 2010.

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
Field station	£75	£120	(+) £45	I underestimated my field station rent. This amount is for 8 months of project work completed. I still have 4 months of field work remaining
Tracker salary	£375	£360	(-) £15	The minimum salary has increased since the start of the project. This amount is for 8 months of project work completed. I still have 4 months of field work remaining
Purchase of a GPS	£75	£0	(-) £75	Not purchased. Additional funding was used for the purchase of a GPS
Stationary, Contingency, Communication	£375	£300	(-) £75	The remaining amount will be used to carry out the project for the remaining 4 months.
Purchase of a laptop	£500	£500	£0	Purchased as budgeted.
Vehicle for field work	£1250	£2000	(+) £750	Vehicle purchased at budgeted amount in very poor condition, so I had to look for a better vehicle as I couldn't afford to get stuck in the forest.
Fuel	£625	£475	(-) £150	The remaining amount will be used to carry out the project for the remaining 4 months.
Travel and Transport	£1150	£900	(-) £250	The remaining amount will be used to carry out the project for the remaining 4 months.
Maintenance	£125	£100	(-) £25	The remaining amount will be used to carry out the project for the remaining 4 months.
Field work	£450	£360	(-) £90	Used as salary for second assistant (not budgeted earlier). The remaining amount will be used to carry out the project for the remaining 4 months.
TOTAL	£5000	£4990		£10 remaining

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

More research should be continued and long term studies monitoring the changes that are brought about to the habitat should be carried out. The Forest Department here needs more technical guidance to manage the Reserves that are home to elephant and many other species of endangered flora and fauna. As I will very shortly have data on the effect of weed invasion on elephant feeding

behaviour, it will be important to see how weed invasion affects elephant ranging. Lately, there have been several cases of electrocution of elephant (for example 23. 12. 2008 / 14.01.2009) just within the Nilgiri Biosphere Reserve. Ranging out of forest habitat and into human habitation could well be attributed to reduced food available to elephants within the forest. This causes them to move out increasing potential for the Human-elephant conflict. We need to study the root of the human-elephant conflict which is very high in certain parts of the Nilgiri Biosphere Reserve. The next important step would be to study the effect of weed invasion on other herbivores as well.

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?

Only one preliminary report was sent to the Forest Department in the state of Tamil Nadu in South India. Rufford was acknowledged for financial support. At the time of the report, Rufford was the only funding agency and therefore all work carried out was credited to the financial support by Rufford. The RSG logo will continue to be used in all future presentations and publications.

11. Any other comments?

Without the funding provided by Rufford, preliminary work could not be carried out. This project is now well underway and is one of a kind. I am extremely grateful to Rufford for this support. Presently I am only a little past half a year into this 12 month proposed project. I have been able to develop and strengthen my work under the guidance of my supervisor, Dr. Wayne Linklater at Victoria University of Wellington, New Zealand. I was away from field work for a period of 11 months between October 2007 and Sept 2008 developing the proposal and registering for my Ph.D. in Conservation Biology. Together, my supervisor and I have been able to incorporate several methods to expand this study to provide more scientific research results. Although I have over spent my budget, I have been able to secure additional funding to support the rest of my work and to continue my work through to completion.