

## The Rufford Small Grants Foundation

### Final Report

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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. The Final Report must be sent in **word format** and not PDF format or any other format. 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. Please note that the information may be edited for clarity. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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#### Grant Recipient Details

<b>Your name</b>	Onja Harinala Razafindratsima
<b>Project title</b>	Functional differences within a guild of frugivorous lemur species: impacts on host-plant dynamics
<b>RSG reference</b>	5748-1
<b>Reporting period</b>	August 2010 to August 2011
<b>Amount of grant</b>	£5,978
<b>Your email address</b>	<a href="mailto:onjhar@hotmail.com">onjhar@hotmail.com</a>
<b>Date of this report</b>	August 1, 2011

**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
Conducting research on the impacts of lemur behaviour on forest community structure			X	I have been conducting fieldwork in Ranomafana National Park since June 2010 until July 2011 to collect behavioural data on three lemur species in Ranomafana National Park
Developing spatially-explicit model to understand the role of lemurs in the regeneration and restoration of forests and the potential consequences of their loss		X		I am actually in the process of analyzing data and developing GIS and spatial modelling for the project
Conducting field experiments to determine the potential impacts of lemurs in the forest dynamics		X		I started the experiment last year and initiated another one with more species this year. Both are still running. Two research technicians are monitoring seedling growth and survival.
Training and collaboration of students and local communities			X	I have been working with a Malagasy undergraduate student as my assistant and trainee, and with five Malagasy research technicians and four local guides. They were helping me collect data for the project, and I trained them in methodology for studying primates and their conservation. I also help the student create her own independent project and we have collaborated in conducting community outreach.

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

The main problem we have encountered with this project was being able to locate enough groups of lemurs for behavioural studies, especially for *Varecia variegata* at the beginning of the studies. We then explored other part of the forest, in Mangevo area, to find previously habituated groups of *Varecia variegata*.

Also, few data were collected from December 2010 to March 2011 because it was the cyclone season in Madagascar and therefore it was sometimes impossible to work inside the forest as water level of the river cover the bridge.

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

- 1) Insights on the importance of lemur behaviour, as seed dispersers, for forest regeneration and restoration of degraded habitat
- 2) Training and education of Malagasy students and local people
- 3) Local conservation outreach

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

Last year, I worked with five technician-guides at Centre ValBio; only one of them had worked on a long-term primatology project, the others were specialists in bird observation and botanical projects. Therefore, I took part in training them about primatology and conservation. One of the technicians has been an expedition cook previously but he is familiar with the local flora and fauna, and Centre ValBio had put him under different projects to learn field research and be familiar with conservation projects so that he will be promoted officially as a research technician assistant. I trained this technician on data collection, monitoring lemur behaviour, using GPS tools and using a densitometer to measure canopy covers. By the end of my stay, all research technicians had adequate field study skills. He was continuing data collection with a research technician during my absence in field.

This year, I was working with the same technicians and three Mangevo local guides who were familiar with the site, tracking lemurs and identifying plants, but needed more training toward the goals of our project. Moreover, I was training two new local guides on tracking lemurs and using various field-equipment for this project.

Also, as part of the collaboration between Malagasy universities and foreign institution conducting research in Madagascar, I mentored an undergraduate Malagasy student, Miora Andriamalala, in conducting and initiating research and fieldwork, and helped her in developing her independent project looking on the regeneration capacity of plants consumed by *Varecia variegata* and the influence of environmental conditions on their regeneration. I had taught her methods for lemur behavioural observations, use of GPS tools and all equipment/materials used for the project, conducting vegetation survey in transect and quadrat, designing experiment, writing research proposal, preparing and presenting a talk, and performing statistical analysis and tests with some statistic packages. For a short period of time that I was absent in field site, I let her be in charge of the camp and lead the team.

Miora and I have participated in community outreach that we designed and conducted at two local primary schools near the Mangevo field site. The goal was to share with the school kids the importance of the biodiversity as a whole interacting community and the need for conservation of Malagasy unique and endemic species, while creating a friendly educational environment with games. The game consisted of creating a forest community by assigning to each kid a species (animal or plant) and all other components of the environment that they could enumerate, and then showing them the interaction of all the species by making one kid being a perturbation agent destructing one member from the community.

**5. Are there any plans to continue this work?**

I am planning to continue this work by focusing more on local conservation outreach and education of the villagers near Mangevo site, and by conducting reforestation project to connect forest fragments in order to encourage the movement and dispersal of lemurs into the regenerating habitats.

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

I am planning to share the results of my work through publications in peer-reviewed journals, presentation at conservation, ecology or primatology meetings, conferences and seminars, and via media communication.

In fact, I have already presented a part of this project at the joint meeting of the Association of Tropical Biology and Conservation (ATBC) and the Society for Conservation Biology (SCB) held in Arusha, Tanzania in June 2011. I also have been invited as a seminar speaker to talk about my project at the Ecole Normale Supérieure (a branch of University of Antananarivo). Also, during my stay in Ranomafana, I was interviewed by several Malagasy newspapers and by Malagasy's public television station about my research and its implications to conservation, and was profiled in a national Malagasy newspaper. Media communication is a good way to increase people's awareness of the important role of lemurs for the maintenance of Madagascar's natural resources.

**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 for 10 months representing 50% of the actual 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.**

Exchange rate used: 1GBP = 3347.75MGA

Item	RSG Budgeted Amount	Actual Amount	Difference	Comments
Round-trip airfare Houston-Madagascar-Houston	1,690	1,823.80	(133.80)	A slight increase in the airfare tickets
Local transportation and travel while in Madagascar	65	406.54	(341.54)	My planned mean of transportation was bush taxis. However, with the current crisis situation in Madagascar resulting in the increase of insecurity and crime, and the fact that I am travelling with expensive field equipment and materials, I figured it was safer and easier to rent a car. The amount presented here represents car rental/maintenance and gas for trips Antananarivo-

				Ranomafana.
Station fees at Centre ValBio Ranomafana (for myself and students)	1,463	462.88	1000.12	We did not stay long at the research station Centre ValBio, but instead camped near our study sites most of the time. Therefore, part of the money budgeted for station fees were used toward food purchase for everyone on camp.
Expedition food for everyone on camp	0	584.69	(584.69)	
Malagasy research technicians	975	1,073.49	(98.49)	Beside working with Centre ValBio's research technician, I was also hired local guides to create employment in the local community and to give them opportunity to learn more about our biodiversity and its conservation
Malagasy student assistantship	975	647.78	327.22	Assistantship was only based on a per diem basis in field, but she didn't stay in field during the whole project period
Malagasy student dissertation fee	162	149.35	12.65	This is required by the Malagasy university to help the student-assistant in fulfilling her degree requirements.
Malagasy student lab fees	0	149.35	(149.35)	As part of the collaboration between Malagasy universities and researchers conducting research in Madagascar, this fee was required by the student's University to help fund for materials and equipment needed by the student to conduct her independent project, and for the University's training.
CAFF/CORE representative in field	507	0	507	A CAFF/CORE representative was required by park managers to supervise the work of a researcher within a park, but they finally decide it is not necessary for my project since my work didn't involve any animal capture.
Field equipment	0	100.42	(100.42)	There were some equipment that we needed
Miscellaneous field supplies	0	60.29	(60.29)	We ran out of some supplies during our field work
F-1 Visa application	55	83.64	(28.64)	Increase in the amount of Visa application fees
Research permit MICET	0	207.38	(207.38)	This is required to enter and do research in the park. My previous research permit expired after 6 months, so this is for a permit

				renewal.
Park entrance fees	21	16.43	4.57	The research technicians did not have to pay for tickets when entering the park
Satellite camp fees	0	17.92	(17.92)	This was required when camping inside the forest at the park satellite campsites.
Medical care in field	65	10.34	54.66	Everyone on camp were healthy, except for some minor wounds and cold.
Communication	0	60.55	(60.55)	We bought a local telephone, a key for internet access and phone cards needed in case of emergency in field, to arrange appropriate logistics and to contact academic advisor when necessary.
Literature and documentation	0	109.23	(109.23)	We bought a book relevant and important for the project, and printed some documents.
Other costs	0	14.01	(14.01)	This included mailing waterproof datasheets and some equipment to technicians continuing work via a student in the US, photocopying datasheets and cleaning field equipment after expedition
<b>Total</b>	5,978	<b>5,978.09</b>	(0.09)	

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

- Analysing the collected data and writing a manuscript to be submitted in a peer-reviewed journal.
- Developing and conducting a reforestation project.
- Continuing this research in forest fragments.

**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?**

I used the RSGF logo in my talks. Also, I have been invited by the US embassy English Teaching Program to give a talk to Malagasy students to promote the study in the US in conservation-related field. And I advertise my RSGF funding during my talk.