

## 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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#### Grant Recipient Details

<b>Your name</b>	Eleanor Frew
<b>Project title</b>	Potential ecological factors limiting the density of Eulemur flavifrons in differently degraded forest fragments on the Sahamalaza Peninsula, NW Madagascar
<b>RSG reference</b>	11898-1
<b>Reporting period</b>	September 2011 – August 2013
<b>Amount of grant</b>	£955.00
<b>Your email address</b>	ef8559@bris.ac.uk
<b>Date of this report</b>	28/08/2013

**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
Identification of food sources utilized by <i>E. flavifrons</i> , and determination of the availability of these food sources in differently degraded forest fragments.			X	Forest fragment descriptions have been completed, and trees present in each fragment have been identified, and categorized as "feeding" or "non-feeding". Annual availability of each food source has been recorded (i.e. which foods are available during which months). Top ten utilized food sources have been identified for each fragment during each season.
Estimation of energy intake by <i>E. flavifrons</i> in differently degraded forest fragments.			X	Energy intake rates and accumulated diurnal energy intake have been estimated using data gained from nutritional analysis of food item samples, and statistical comparisons have been made between forest fragments, season and sex.
Monitoring the effect of varying nutritional ecology on social interactions within groups of <i>E. flavifrons</i> .		X		Socio-positive and agonistic behaviours have been identified and recorded quantitatively. Statistical analysis is yet to be completed.

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

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

1. The identification of tree species utilized by *E. flavifrons*, which allows reforestation measures to be adapted to focus on those tree species.
2. The identification of preferred and critical food sources, which allows conservation efforts to be focused on those areas most likely to support the long-term survival of *E. flavifrons*.
3. The estimation of diurnal accumulated energy, which allows the modification of dietary guidelines for *ex situ* conservation breeding programmes and the improvement of the nutritional health of captive individuals.

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

Malagasy students, from the University of Mahajanga, accompanied the primary researcher. Each student assisted with practical field work, gaining valuable methodology and experimental design skills. Full results and any published material will be sent directly to the Malagasy students involved, once the MSc project write up has been completed. Five field guides, and two cooks, were employed from the local villages of Maravato and Antafiabe. This provided an income for these individuals. For the field guides, it also provided valuable experience guiding non-local individuals through the forest

and practising language skills, which can be put to use in the future as an eco-tourism camp is being developed at the site.

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

The data collected during this MSc project can be used by future students travelling to Ankarafa to work with this species of lemur, and may be developed into a Phd project by future students working with the University of Bristol in collaboration with Bristol Zoo Gardens and AEECL.

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

All data, results, statistical analysis and conclusions will be included in a final MSc by Research Thesis (to be completed within the next two months). Forest fragment descriptions and results relating to energy intakes, will be submitted for publishing to an appropriate journal.

**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 solely for Nutritional Analysis costs. The Leibniz Institute for Zoo and Wildlife Research processed food item samples over a period of 4 months. All nutritional results were received by February 2013. This long processing time was anticipated, as MSc projects do not take high priority when processing samples.

**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
Travel	£766.00	£766.00	£0.00	
Fees, Student Stipends & Salaries	£758.00	£758.00	£0.00	
Equipment	£944.00	£944.00	£0.00	
Accommodation & Sustenance	£333.00	£333.00	£0.00	
Nutritional Analysis (Sample Preparation, Crude Ash, Detergent Fibre Analysis, Crude Fat, Nitrogen Analysis)	£955.00	£1459.42	£504.42	Protein analysis costs were originally under estimated. However, the funding for the difference came from another MSc Researcher, investigating Nitrogen content of food samples.
<b>TOTAL</b>	£3756.00	<b>£4260.42</b>		

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

Publication of results, dissemination of information to Malagasy students and locals, as well as AEECL and Bristol Zoo Gardens, thus ensuring results are used to facilitate the development of conservation action plans in the Sahamalaza region.

**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 has been acknowledged using the name and logo on all public engagement material related to the project. Any publications will also include acknowledgements to RSGF and the use of the logo.