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. 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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Nuru Nyazirari Kitara
Project title	Population size, Threats and Conservation measures of *Lobaria pulmonaria* in Tanzania. A case study of forest lichens on Mount Kilimanjaro.
RSG reference	11618-1
Reporting period	July -2012 to July -2013 (extension requested until March 2014)
Amount of grant	£5988
Your email address	nurukitara@yahoo.co.uk
Date of this report	28/03/2014

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
To map the distribution of *Lobaria pulmonaria* (L.) Hoffm on Mount Kilimanjaro.		Yes		GPS coordinates have been taken and maps for the distribution of *Lobaria pulmonaria* (L.) Hoffm on Mount Kilimanjaro will be produced.
To assess the population size of *Lobaria pulmonaria* (L.) Hoffm on Mount Kilimanjaro.		Yes		Data have been collected to estimate the population size of *Lobaria pulmonaria* (L.) Hoffm per each tree species.
To assess the genetic differentiation of *Lobaria pulmonaria* (L.) Hoffm across different bio-climatic vegetation belts along altitudinal ranges on Mount Kilimanjaro.		Yes		Data have been collected and specimens will be transported to Zurich-Switzerland at WSL for genetic analysis of *Lobaria pulmonaria* (L.) Hoffm.
To raise awareness of the local people around Mt. Kilimanjaro on lichens and their habitats.			Yes	Four environmental clubs from Palangeny, Andrea, Marangu Hills Academy and Lyasomboro primary schools respectively were established and actively involved in forest lichen conservation programmes.

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

Writing down the PhD research proposal and carrying out the project (raising awareness on lichens and their habitats for the local people around Mt. Kilimanjaro) as well as carrying out field activities in 1 year was quite a challenge that cost extra time and money. I am thankful for the grace period from Rufford for the extension of time. Also, I am thankful for the Tanzania Commission for Science and Technology (COSTECH) for their extra grant to support this project.

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

I. The lichen project on Mt. Kilimanjaro has become well known in some villages through formation of school environmental clubs.
II. Tree nurseries with over 500 different tree species have been established in Palangeny, Andrea, Lyasomboro and Marangu Hills Academy respectively to mitigate forest degradation activities on Mt. Kilimanjaro and these trees will be distributed to the communities around Mt. Kilimanjaro.
III. Specimens have been collected for population analyses of *Lobaria pulmonaria* (L.) Hoffm and the results will be a benchmark for subsequent lichens studies in Tanzania.

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

Four primary schools were included in the project and actively participated in essay writing, drawing, sports competitions and singing songs with the message of forest - lichens conservation.

5. Are there any plans to continue this work?

Yes, we plan to conduct lichen research projects on other high-altitude mountains such as Mt. Meru in Tanzania and other mountains in Kenya and Uganda.

In order to raise awareness on forest lichens, we plan to form more school environmental clubs in the communities that surround Mt. Kilimanjaro. Only by reaching school children can we ensure that our lichen conservation message will be heard and implemented for the coming decades.

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

Public presentation based on the research findings will be conducted to different stakeholders such as Sokoine University of Agriculture (SUA) and Commission for Science and Technology (COSTECH). New lichen data will be added to Tanzanian national node of the Global Biodiversity Information Facility (TanBIF) and some research findings will be published on the peer-reviewed international journals.

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

This project took 20 months. An extension of 8 months was requested to complete data collection from the forests on Mt. Kilimanjaro. The anticipated length of the project was twelve months.

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
Salary of the applicant	1671	2506	-835	The difference was covered by the grant from COSTECH
Research assistant Salary	1194	1432	-238	A porter and cook were hired to support our field activities.
Car hire	2089	2089	0	
Handheld GPS	318	318	0	Purchased
Stationeries; photocopies, brochures with coloured illustrations, printing and binding	398	398	0	Also, t-shirts with RSGF logo, posters and banners were prepared for sensitising the local people on lichens and their habitats.
Research permit, park entrance fee for two persons	318	0	+318	A free pass to Kilimanjaro national park (KINAPA) was permitted. The remaining

				amount will be spent for data analysis and publication of the research findings
Total	5988	6743	-755	

1£= 2513 Tanzania Shillings (TZS)

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

i Publication of research findings.
ii Establishment of more school environmental clubs around Mt. Kilimanjaro.
iii Establishment of a website for Tanzanian lichen species.
iv Collection of lichen specimens for preserving in one of our herbaria.
v Conducting further lichen research projects around East African montane forests.
vi Networking among Tanzanian RSG recipients and/or with other environmental conservation stakeholders.

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. The RSGF logo was used on my poster presentation during the 21st - 22nd October 2013 RSG recipients conference in Mombasa, Kenya. Also, on 15th March 2014, t-shirts and caps with the RSGF logo were distributed to primary school children's environmental clubs and to their coordinators from Marangu Hills Academy, Lyasomboro, Andrea and Palangeny primary schools as participants in the forest lichen conservation campaign. The campaign included; essay writing, drawing picture of *Lobaria pulmonaria* species, sports (soccer and badminton) and visiting forest - lichens up to 2720m asl around Mandara hut on Mount Kilimanjaro.

11. Any other comments?

The Rufford Small Grant has enabled me to conduct my PhD research project at Sokoine University in Tanzania, and through this grant, we have been able to draw a benchmark for the applied lichen project in Tanzania**.**