

## The Rufford Foundation

### Final Report

Congratulations on the completion of your project that was supported by The Rufford 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**

Grant Recipient Details	
<b>Your name</b>	Girma Eshete Genbere
<b>Project title</b>	Ecology of Afro-alpine ecosystem in a changing world: applications for Ethiopian wolf conservation
<b>RSG reference</b>	13953-1
<b>Reporting period</b>	8th October 2013- 3rd September 2014
<b>Amount of grant</b>	£5949
<b>Your email address</b>	<a href="mailto:girma.eshete@yahoo.com">girma.eshete@yahoo.com</a>
<b>Date of this report</b>	27 October 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
Identifying the effects of grazing upon rodents in (abundance and richness) by studying the associations between rodents and micro-topography, vegetation and soil in Afro-alpine areas under different levels of exploitation		X		Rodent populations were sampled from both grazed and ungrazed land uses using live Sherman traps laid in 12 grids of 40m X 40 m area which resulted a total capture- recapture of 451 individuals, two diurnal rodent species ( <i>Arvicanthis abyssinicus</i> & <i>Lophyromys flavopunctatus</i> ) and one nocturnal ( <i>Stenocephalus griseicaudata</i> ) and more than two shrews (not levelled in species) were identified. Additionally the existence of the uncatchable fossorial rodents, the east Africa mole rats ( <i>Tachyoryctes splendens</i> ), were proved from their burrow counts. This data is also augmented with surface soil sampling to quantify compactness due to grazing by testing soil bulk density in lab and vegetation samples (by measuring height & cover percentage) at different level. From our preliminary analysis using Mark & related software to produce statistically robust results that show the impact in abundances/density of rodents in the two land uses further intensive trapping is mandatory. Since this is a main chapter of PhD that need to be published in a standard journal for wider application the data set produced so far from this project valuated as a successful achievement.
Studying the diet and foraging strategy of Ethiopian wolves		X		Wolf scat collection for this study has been progressing well with our trained local wolf Ambassadors (wolf monitors). As expected in high

<p>under different scenarios of prey availability and human disturbance</p>				<p>human dominated landscape with small wolf population getting enough scat samples was tempting and the existence of other sympatric species (common jackal and dogs) made the identification more difficult. Therefore, the study combined DNA analysis which its lab result needs some time. After that, we will produce the manuscripts on foraging ecology of Ethiopian wolf under different scenarios.</p>
<p>Exploring human wildlife conflicts and attitude due to livestock predation</p>			<p>X</p>	<p>Our above ecological data was backed up with socio-economic data collated by interview and actual predation survey system established to assess the local attitude and factors drive to human wolf conflicts due to predation. This facilitates the conservation effort of Afro-alpine ecosystem and its flagship species the Ethiopian wolf, together with other endemics inside. Thus, the study results will be released in publication soon combining the South and north wollo highlands of our previous work.</p>

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

Even if perfect project is designed, it would not possible to avoid some unforeseen difficulties; the critical issue is the actions taken to resolve the problem and the lessons learned. There were some minor problems during our project time. Five Sherman live traps were stolen in one day from one of our grids and it was resolved by assigning or employing trap care taker in the field and by replacing the lost ones from our contingency traps. In our diet study, lack to find enough wolf droppings (scats) and difficulty to identify in the field from sympatric species obliged us to do DNA lab analysis with additional more time against the scheduled.

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

The three most important outcomes of the project are

1. The project has involved the local community representatives, trained them on ecological field survey and strengthen the data exchange network between the community and the local conservation organisations such as the Borena Saynt National Park (BSNP), the Ethiopian Wolf Conservation Programme (EWCP) and with our ongoing research project in the area.
2. This project generated a potential ecological and socio-economic data that can show the impact of grazing in different land uses on rodent communities and the Ethiopian wolf diet and foraging behaviour. Rodent species of the area were identified, their density in protected and unprotected land uses was estimated and additionally data sets from the two land uses were collated on vegetation, soil and topography that enable to quantify the habitat. Likewise, socio-economic data on community ecosystem resource use, attitude towards and conflict with Ethiopian wolf due to predation was generated.
3. Besides papers that intended to publish, reports that communicate the findings to the conservation authorities and educational materials summarised from the project findings to create awareness to the local community are outcomes of the project that can contribute to the conservation of the biodiversity and to the sustainable resource use of the local community from Afro-alpine ecosystem to support their livelihood.

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

In our project the local communities are fully involved in the interview process, and they suggested their need and aspiration freely how to conserve Ethiopian wolf and Afro-alpine ecosystem. Local communities were benefited in a variety of ways directly involved in ecological data collection after training as field assistant, working as local guide, camp and trap attendant, and in renting pack animals. Moreover, the local community representatives, wildlife biologists, environmental protection and land use experts and district heads were participated in workshop organised in collaboration with EWCP. The local park scouts and wolf ambassadors trained in a practical ecological field surveys by us and have got a good opportunity that enabled them to work for the future with new researchers coming in the area and also assisted the park office and Ethiopian wolf conservation programme in reporting accurate data on wolf monitoring, actual wildlife predation report and wildlife sightings etc.

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

Yes, this project is on-going because it is part of PhD study plus still there are activities that need refining from this project, according to our preliminary data analysis. For example, census transect need to be conducted across the habitat to determine the current domestic livestock density ranging in the habitat and to quantify the real pressure. Wolf scat will be sampled for DNA analysis, and at least one more season small mammal survey will be conducted to relate our rodent density with other microhabitat and Ethiopian wolf carrying

capacity. With Wolf Ambassadors and trained scouts our actual predation survey will continue to produce more data that enable us to validate the reliability of the perceived predation data from interview. The research team believed all these and combined efforts with other conservation organisations in the area will help in finding the long term solutions towards conserving Ethiopian wolf and their habitat, as well as improving the local community livelihood in the study area and beyond. Therefore, Plans are underway to submit and to mobilise fund that can ensure the continuity of the project from the Rufford foundation continuation grant and from other stockholders that finance conservation.

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

To share the research outputs to the international communities, articles will be published in peer reviewed international journals. For local use, other technical reports will be circulated to protected area managers and authorities in addition to the workshop. In addition, during my PhD study visit to my supervisors in Oxford and Leiden I hope to present results at least in one international scientific conference. Finally, I will upload my publications to the Rufford Foundation website to acknowledge my grant donor and to share my work for Rufford foundation’s website visitors.

**7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?**

The Rufford Foundation grant was released in October 2013 for activities to be implemented within 12 months. Therefore, the project activities were carried out from October 2013 to September 2014 and the grant was used throughout these months as scheduled.

**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.**

Local exchange rate 1£ = 30.52 Ethiopian Birr (ETB)

Item	Budgeted Amount	Actual Amount	Difference	Comments
Researcher per diem (field stipend) 240 field days*£5.354	£1285	£1285	0	
Per diem for field assistants 180 field days*£4.64 & £2*90 days	£835	£1015	-£180	We paid additional for camp guard and trap caretaker after five traps stolen in the field.
Travel (for car rental, bus travel and to use pack	£1300	£1550	-£250	Due to transportation cost increment in both

animals)				fuel price and car rental
Field equipment ( an alpine tent, sleeping bag, binoculars, GPS, boots waterproof clothing, bags, torches, mattress, gloves, clipping scissors and external drive )	£650	£829	-£179	We bought all equipment planned with some basic additional, their price difference is due to logistics, taxation and the additional field equipment
Laptop for data entry and analysis	£500	£350	+£150	The money saved from computer covered most cost differences in equipment
Stationery includes printing education materials	£300	£300	0	
Internet and telephone	£150	£197	-£47	Includes courier services
Workshop and training to park scouts and local wolf ambassadors on practical ecological field surveys.	£540	£460	+£80	We also used from this money to cover the remaining difference in field assistants, equipment and some in the internet section
Contingency 7%	£389	0	+£389	We used the contingency to cover all expense difference in transportation and most difference in field assistants section
<b>Total</b>	<b>£5949</b>	<b>£5986</b>	<b>-£37</b>	

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

At this stage I have data on ecological resources of the ecosystem and the resource use pattern of the local community. At the start of my PhD study in BSNP agreement was made with the park management authorities and other conservation organisations in the area using the study findings of my PhD, and other long term datasets of the park and data sets of local conservation organisations using as an input, to revise and prepare a new management plan for the BSNP. Therefore, after releasing the findings of this study, ahead the important next step will be designing the new management plan involving all concerned, interested and affected parties from local community level to the higher national authorities. Basically this mandate is the Amhara National Regional state Tourism Park Development and wildlife Protection Bureau. Therefore, it is expected that the Management plan that will be prepared geared according to this research finding focusing

on a win-win approach in developing the biodiversity of the ecosystem and in ensuring the sustainable resource use of the local community. Thus, since my PhD project continue in the area for the next two to three years I will collaborating in reducing the local community resource use pressure on the ecosystem biodiversity by educating people

- To adjust their current unsustainable land use practice, otherwise as they will lost the benefits that Afro-alpine ecosystems currently give to them
- To create alternative income generation initiatives like community based wildlife tourism.
- To empower the local community to develop their own conservation based resource use bylaw
- To mitigate human-wildlife conflict, due to wildlife persecution

**10. Did you use The Rufford Foundation 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 in all printed educational, training materials and slides prepared. It will continue to use on report documents of this project, on posters of conferences and acknowledging the foundation in our produced articles for publication

**11. Any other comments?**

We (the research team) would like to take this opportunity to thank the Rufford Small Grants Foundation (RSGF) for conservation commitment in funding this project, and the Ethiopian Wolf Conservation Programme (EWCP) for every support in working with us. We also grateful the Borena Saynt National Park office and the Regional State Bureau of Tourism, Park Development and wildlife Protection for their permission to the study. Last but not least, we would grateful the local community for taking part in our project.