

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.

Grant Recipient Details					
Your name	Anagaw Atickem				
Project title	Estimating population size and habitat suitability for mountain nyala in areas with different protection status				
RSG reference	76.04.09				
Reporting period					
Amount of grant	£4200				
Your email address	anagawa@yahoo.com				
Date of this report	December 15th 2010				

Josh Cole, Grants Director



1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not	Partially	Fully	Comments		
	achieved	achieved	achieved			
Distribution pattern			Fully	Regardless of our large study area, 15,000		
			achieved	km ² , we are confident to have a very good		
				coverage for the distribution pattern study.		
				We do not expect any population left behind		
				except our suspect of nyala presence some		
				45 km east west of Dodolla. A very steep cliff		
				to cross which was out of our budget plan. If		
				this population exists, it is likely to be in quite		
				small number. We did a bit of mistake in the		
				detail planning of the survey which I feel now		
				we could minimize our cost by planning our		
				root surveys differently.		
Estimating			Fully	We did good job here. Yet, we recommend to		
population size			achieved	maximise the accuracy of the degradation		
				rate and defaecation rate to get better		
				results in the future that enables to get		
				smaller confidence interval.		
Developing habitat			Fully	We believe, we did excellent job here. We		
suitability map			achieved	hope the localities identified with this		
				research as highly suitable areas will be used		
				for the future conservation of the species.		

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

We have decades experience of field work in Bale and we are familiar with most of the challenges. We were challenged in determining degradation rate for some technical reasons coupled with the ever nature of the difficulties of this kind of estimate.

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

The most important out come of this research is it contribution for the knowledge of the species ecology and genetics which have important contribution for the conservation of the species. Much of the information in the IUCN (2010) is updated based on this research http://www.iucnredlist.org/apps/redlist/details/22046/0

To be more specific

1. This research covers the entire potential range of the species. With this, we confirmed the largest mountain nyala population in localities which were not described before for having such high abundance for the first time.



2. A reasonable habitat suitability map for the mountain nyala conservation is identified with this research. We do hope, conservation managers to delineate some of this critical area before humans use intensified in such localities.

3. Combining genetics (microsatellite DNA, pellets as source of DNA) and habitat suitability map, this research provide the best corridors to be protected. In addition, we provide 12 microsatellite markers that potentially could be used for population genetics studies.

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

100% of this grant ended up with the local people either though per diem or horse rent. All my four permanent field assistants (Dinsho town, 3 km from Bale Mountains National Park headquarters who are very well trained and have experience in wildlife research) and those who work for us as temporary base are from the local people.

5. Are there any plans to continue this work?

Yes. We would like to continue working on distribution pattern and population estimate on the second largest mountain nyala population in Arussi. We received 2 m resolution satellite image from Planet Action Fund by donation (<u>http://www.planet-action.org/web/85-project-detail.php?projectID=3387</u>) but we do not yet manage to get grant for this. I travelled in the area for more than 350 km by foot and horse to get pellet samples for the genetics study. I got the impression that the population in Arussi is sharply in decline. In Chillalo, in one of the localities in Arussi for high mountain nyala density, I did not get any sign for the presence of mountain nyala. From our genetics data, the population in Arussi is differentiated from Bale by 10% (Fst value). Hence, it is important not this population to be exterminated.

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

Conclusive results of this research will be published and will be available for any interested individual or organisation. For the rest of the results, we are planning with Paul Evangelica, a researcher who has been working with mountain nyala for the last few years.

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

The grant from RSG is used between August 25, 2009 to April 28, 2010. The original plan was to hire three field assistants for 200 days of field work. During the field work, four permanent assistants were hired and in the remote areas, we additionally hired a local people to that particular area.

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
Per diem (£7 per day); 141 Ethiopian birr per	£4200 (84,74 Ethiopian birr)	3 £4200 (84,743 Ethiopian birr)		We got the grant to support field assistance
day				



We received £4200 to support the field assistants for 200 days of field work. I have four well-trained assistants, but whenever we arrived to new remote areas, we also hired local people in that particular area. The normal trend for the payment is mainly £3.5 per day. We paid some £500 in those particular situations. Otherwise, we spent the money as we planned to do.

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

In relation to the future research, the status of the population in Arussi is critically important. Next, the very high juvenile mortality we observed in the Gaysay area where we did behavioural study from collared animals should be further assessed and identified.

When we come to the application of our previous research, it is clear that the largest mountain nyala population found in the eastern escarpment and its habitat should receive special conservation management plan. We send a short report with the manuscript we have to the responsible authorities and conservation managers. We also will recommend the corridors that are crucial for the mountain nyala population. Yet, we do not have any guarantee to see this in practice. The conservation practice in Ethiopia looks deteriorating from time to time.

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 was very tight in field and laboratory analysis. I did not do much presentation. Yet, I acknowledge RSGF in the accepted paper in *Animal Conservation*. I will acknowledge in two other papers soon to be submitted. One of these papers aimed to be submitted to *Molecular Ecology* journal with the title "Genetic population differentiation and least cost path corridor as landscape connectivity for the conservation of mountain nyala population". By combining the genetic data and the habitat suitability map indicated in the Animal conservation paper, we designated a potential corridor by using GIS.

11. Any other comments?

This research is the ever first extended and detailed study of mountain nyala. Yet, it was not possible without the grant from RSG. We are very grateful for your assistance.

