

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Dr Emma Stone
Project title	Assessing the status of African wild dogs in Malawi – building a long term conservation strategy.
RSG reference	13425-1
Reporting period	2013-2014
Amount of grant	£6000
Your email address	Emma.stone@bristol.ac.uk
Date of this report	09/03/2015

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
<p>Objectives 1-3</p> <p>1. Determine the abundance, demography and distribution of wild dogs and competing carnivores (lion, hyaena, cheetah and leopard) around KNP;</p> <p>2. Examine relationships between co-predator activity rates to assess levels of intra-guild competition;</p> <p>3. Describe and compare habitat use of carnivores in KNP with regard to structural features and prey densities;</p> <p>Activity i) Systematic photographic surveys</p> <p>Activity ii) Photographic database</p> <p>Activity iii) Audio-playbacks</p> <p>Activity iv) Spotlight transects</p>				<p>Two camera trap grid surveys have been completed and a third is in progress. Due to the large size of the park (2316 km²) and vehicle breakdown this survey is ongoing. Two cameras were destroyed by hyaena during our first grid, such that we are surveying smaller areas in each grid.</p> <p>Completed. Two hyaena clans (n = 11 in one clan and four to six in the other) have been identified and four leopard. Opportunistic sightings have confirmed a minimum of three lion and nine wild dog.</p> <p>We have completed audio-playbacks in KNP (n = 12 sites, total sampling area 386km²). Data were sufficient for estimates of hyaena densities (0.03/km) providing a park population estimate of 78 animals (see end of year report).</p> <p>Thirty-five spotlighting transects were completed across wet and dry seasons (n = 350 km driven). Mammal observations were recorded on 51.4% of transects (n = 117 total observations) with a mean of 3.3 observations per transect across seasons.</p>
<p>4. Determine distribution and density of large mammals</p> <p>Activity v) Large mammal transects (n = 20)</p>				<p>We have conducted the first year of transect surveys. 49 large mammal transects were completed across the wet and dry season (n = 490 km driven). Large mammal observations were recorded on 40.8% of transects (n = 36 total observations) with a mean of 0.7 observations per transect (mean 0.07 obs/km) across seasons. (see</p>

				end of year report attached for more details). Duiker were the most common species, followed by reedbuck and kudu. Data are currently being analysed in Distance to produce density estimates for the park.
<p>Objectives 5-6.</p> <p>5. Determine threats to the population including: human wildlife-conflicts, high risk conflict areas and intra-guild competition</p> <p>6. Assess levels of human-wildlife conflict outside KNP</p> <p>Activity vi) Community based questionnaires</p>				<p>This is ongoing, we have conducted some engagement and liaison meetings around the eastern area of KNP and conducted human-carnivore mitigation involving lions around the park (see end of year report for details). The delay in recruitment of a Malawian Outreach Officer has postponed the questionnaire surveys as they just be completed by a local Malawian staff member. We aim to have the staff member in place by the beginning of May 2015 and so the community surveys will commence in June 2015.</p>
<p>7. Conduct awareness and education programmes to minimize conflict and promote coexistence between carnivores and people</p> <p>Activity vii) Awareness packs</p> <p>Activity vii) Education programmes developed</p>				<p>This is ongoing.</p> <p>We have conducted engagement and awareness activities in the form of liaison meetings and talks around and in KNP and conducted awareness at events in Lilongwe, written articles for local press (The Nation Newspaper, The Eye Magazine).</p> <p>The development of the education materials has been postponed due to the delay in recruitment of the Malawian outreach officer (due to contractual delays). The contracts are almost complete and we aim to have a Malawian staff member in place by the beginning of May 2015. Therefore education materials will be developed from May 2015.</p>
8. Produce a wild dog conservation management plan		X		This is a long term objective which is ongoing and will be produced in year 3
9. Build capacity in ecology, research, and biodiversity			X	We have conducted a staff attachment programme whereby

<p>monitoring to facilitate conservation management and research</p>			<p>DNPW scouts are attached to our team and receive training in transect sampling, acoustic surveys and camera trapping. The training workshop (planned for 2014) has been postponed due to the delay in recruitment of the Malawian outreach and research officer (due to contractual delays). The contracts are almost complete and we aim to have a Malawian staff member in place by the beginning of May 2015. Therefore workshops will be scheduled for November 2015.</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

1. Vehicle breakdown: The project vehicle has had four blow outs and significant breakdowns over the last year. The state of the roads in KNP was a significant issue in the tyre blow outs and there are plans to repair it in the near future. It has been out of action for over 4 months which delayed our initial start up, and has subsequently delayed our camera trap surveys and reduced the number of replicates for transect work. We have had to conduct local fundraising to cover the costs of repair. This meant that we have to use some of the budget allocated for a field camera for vehicle repairs to enable us to complete our objectives. The vehicle is currently in need of further repair for which we are seeking funds. Long term we are now seeking further funds for a second vehicle to replace the current project vehicle.
2. Staff Recruitment: There has been a significant delay in the recruitment of the Malawian staff due to contractual and legal delays in the recruitment and contract process here in Malawi. Through assistance from our partners LWT we now have all contracts in place and aim to recruit by beginning May 2015. This has delayed our outreach and engagement components of the project but we aim to catch up in 2015 with extra assistance from LWT.
3. Road access: we have had significant issues with road access in the wet season of 2014. Many of the roads have not been maintained and as such are causing accidents, blow outs and breakdowns. This has limited our range of surveys in the park during this period more than expected.

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

1. Current sightings and confirmation of wild dogs in KNP and NNP.
2. Estimates of prey and carnivore densities and distribution in KNP (the first in over 20 years).
3. Mitigation of human-carnivore conflict in the communities around KNP and in the city of Lilongwe to avoid carnivore mortality and human distress.

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

We have conducted staff attachment for four scouts from DNPW. They have received training in all our research and field techniques including, camera trapping, spotlighting, large mammal and audio surveys. We have conducted community liaison and engagement in the communities around the eastern boundary of the park to assist with human wildlife conflict between communities and carnivores (particularly lions) in the area. In the city of Lilongwe at the request of DNPW we have conducted extensive human-carnivore conflict management with communities in the north east of the city where there has been significant conflict and fear resulting in some hyaena mortality. In partnership with DNPW we have engaged with the stakeholders and community representatives in the area, conducted liaison and provided advice and education. We have conducted den searches and audio surveys to identify clans and monitor movements. In partnership with LWT, the Wildlife Emergency Response Unit (WERU) and DNPW we have conducted a hyaena conservation relocation project to move the target clan away from the high risk area into a protected area (Liwonde National Park).

5. Are there any plans to continue this work?

This project is ongoing. The second stage is to:

1. Augment density estimates from large mammal transects, spotlighting transects and camera trapping arrays to obtain more rigorous estimates.
2. Conduct radio tracking on key carnivore species in each park to establish spatial behaviour, home ranges, vital rates (birth, death etc) and dispersal routes and inform human wildlife conflict mitigation.
3. Conduct intensive searches for the wild dogs using aerial surveys and working dogs for conservation (scent tracking dogs) to locate the wild dogs and facilitate collaring and radio tracking.
4. Expand surveys to Nyika National Park and Vwasa Reserve to search for the wild dog packs to facilitate collaring.

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

We will put our end of year report on our website and send to all stakeholders, funders and partners. We have also conducted a number of national press releases in Malawi (The Eye Magazine, The Nation Newspaper) and will publish papers when data have been augmented. Dr Stone will be attending a workshop in Johannesburg for the Southern African Rangeland Conservation Program for Wild Dog to assist in drafting a National Action Plan for Malawi, and will be attending and presenting project results at the Zoological Society of Southern Africa Congress at Rhodes University, and the Southern African Wildlife Management Association Symposium in South Africa.

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

This is one fourth of the actual length of the project - we anticipate 3 more years work to complete our overall objectives.

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
Camp equipment	£1000	£1008.13	£8.13	
Fuel for field work	£1800	£1,792	£8.00	MWK660/£1
Vehicle Service and Repair costs	£800	£2,168	+£1,368	(spent from camera and hard drive budgets)
Hard drives	£270	£167	£88 spent on vehicle repairs (see above) So £15 remaining	Due to considerable road issues and vehicle breakdowns we had to spend £88 of the money allocated for hard drives on vehicle repairs otherwise we would have not been able to conduct field work.
Solar Panel Charger kit	£850	£850	0	
Field Camera	£1280	£1280 (spent on vehicle repairs see above)	0	Due to considerable road issues and vehicle breakdowns we had to spend the money allocated for a field camera on vehicle repairs otherwise we would have not been able to conduct field work.
Total	£6,000	£5,985.13	£15	

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

The essential next stage of the project is to understand the movements and spatial behaviour of wild dogs and competing carnivores in the park to get accurate estimates of density, dispersal and vital rates. We need to expand the camera trapping and large mammal surveys in the remote areas of the park to complete the full park assessment. We are now seeking further funding for collars, vets fees and a tracking vehicle, to collar and track the carnivores in each park. We will now conduct a capacity building workshop once we have a Malawian staff member in place and commence the education and community questionnaire surveys.

**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?**

The Rufford logo has been placed on our project website (www.wildogconservationmalawi.org), and recognised in all publicity e.g. reports to DNPW, end of year report, three articles for press. We are also conducting an awareness campaign at the festival of nature in Bristol UK, June 2015, at which we will have a stall with the Rufford Logo on display.

There are also many publicity opportunities in process: We have awareness articles pending publication with the Malawian Airlines and South African Airlines in-flight magazines in which Rufford is recognised. We are in the process of filming a documentary for PBS Canada about the human wildlife conflict aspects of our project in which Rufford will be recognised as a key project sponsor.