

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	Lucy Kemp
Project title	Re-wilding of Southern Ground-Hornbills (<i>Bucorvus leadbeateri</i>)
RSG reference	18007-B
Reporting period	October 2015 – October 2016
Amount of grant	£10 000
Your email address	project@ground-hornbill.org.za
Date of this report	3 December 2016

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>Establishment of 'bush schools' and supplementation of existing 'bush schools'.</p>		<p>Continual monitoring, active adaptive management and augmentation of existing 'bush schools.' (see comments). Plans are in motion to establish a new 'bush school' in 2017 on a private game reserve adjoining Mabula to begin growing core populations that will enable natural gene flow and remove the logistical constraints of meta-population</p>		<p>1) The four birds in the latest Loskop 'bush school' (established July 2015) have been at liberty and closely monitored over the entire year to ensure their safety, track their movements and observe behaviour. 2) After the death of three birds at the Thaba Tholo 'bush school' in 2013 (due to suspected poisoning on a neighbouring farm), the surviving female and two new males were re-released in January 2016. An artificial nest was placed strategically to experiment with anchoring the group on the property and prevent them from straying onto neighbouring properties where threat levels are higher. In May 2016, two additional males were released to augment the group - one was accepted by the group.</p>

		management.		3) In April 2016, we attempted to supplement the group at the Mabula 'bush school' with a young male, but unfortunately the group did not accept him and he was returned to captivity. No further attempts were made as the alpha pair have been displaying courtship behaviour and copulation observed. If no eggs are laid augmentation will occur early in 2017
Continual fine-tuning of custodianship agreements with landowners where birds are released.		A draft agreement has been agreed by land-owners that binds commitment of veterinary care, access to property and acceptance that the birds belong to the restoration programme not the land-owner.		Similar agreements are now also in place with captive holding facilities to ensure none of the stock harvested for conservation purposes finds its way into the aviculture trade.
Writing of re-wilding and release protocols for use not only in South Africa, but in		Lucy Kemp's PhD thesis is nearing completion – the molecular analysis will greatly assist in further		<ol style="list-style-type: none"> 1. The assessment of current reintroduction strategies are robust under statistical analysis 2. Recommendations on cost-cutting have been made.

<p>other African countries where southern ground-hornbill populations are also in decline.</p>		<p>guiding both reintroduction and captive-breeding efforts.</p>		
<p>Publication of work in a peer-reviewed journal.</p>	<p>The publication of several papers from Lucy Kemp's PhD are planned for 2017.</p>			<ol style="list-style-type: none"> 1. Analysis of past reintroductions. 2. Genetic structure with the wild population across the entire range. 3. Genetic viability of current captive populations with recommendations for more effective management of captive breeding for conservation purposes. 4. Ecological niche modelling of current range with projection under several climate change scenarios.
<p>Employment creation and training will be given to shepherds, whose job is to monitor release groups daily.</p>		<p>Four monitors received basic training in general monitoring and bird husbandry, First Aid training and attended a snake identification and handling course.</p>		<p>Two more monitors will be hired and trained in the new year. ** Hiring from the land claimant communities has done much to dispel any aggravations about co-management of the natural resources within the Loskop Dam Reserve. Without this the reserves runs the risk of de-proclamation and return to subsistence cattle farming.</p>

<p>On-going associated education and awareness programme aimed at reaching commercial and rural farmers, and rural schools in areas suitable for re-introductions.</p>			<p>We have reached numerous schools, local community members and farmers this year (see comments). Our full-time environmental educator is currently revising our education programme to incorporate new techniques learnt at a training workshop attended in May 2016.</p>	<p>Schools: Four schools (487 learners and 14 teachers) were reached in the Mabula district (October 2015 – March 2016), and a further 20 schools (7 108 learners and 154 teachers) in the Limpopo Valley region (April – September 2016). Community outreach: Engagement with local farmers and community members within a 15 km radius of the Loskop release site is on-going. A population and perceptions survey (113 community members interviewed) was conducted in southern Kwazulu Natal (Oct 2015 – Mar 2016). After rescuing a snared female in Limpopo, 44 community members were reached in the Musina, Cambell and Vivo areas to raise awareness about the birds and encourage increased protection (April – September 2016). Commercial farmers: Several farmers were reached at a local agricultural fair (NAMPO) in May 2016. We are organizing a farmer's day near the Thaba Tholo release site, where poisoning of 'pest'</p>
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species is still rife and remains a significant risk to ground-hornbills.



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E



F

Mabula Ground Hornbill Project 'bush schools' a) Loskop Dam Nature Reserve, b) Thaba Tholo Gmae Farm, c) Mabula Private Game Reserve and d) shepherds whose job is to monitor the birds, e) Patience Shito and Nthabiseng Monama leading an outreach in rural Limpopo River Valley and f) Nthabiseng Monama with community members in a collaborative threat mitigation programme with traditional councils.

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

With every release and associated challenges that arise, we learn more about the species as well as what factors make for a successful release. All this information gets fed back into an adaptive management approach, such that we are constantly improving our reintroduction efforts and protocols. A formal statistical analysis of past releases has now been conducted and will be used to guide future management plans, which now, for the first time can also include genetic considerations. The release at Loskop Dam Nature Reserve was the most logistically challenging given the remote locality, extremely rough terrain and a wildfire during which the birds had to be re-caught and moved for safety. Despite this, the release has largely been a success and all four birds are doing well in their new environment. The death (due to lead poisoning) of a male and injury to another bird planned for release at Thaba Tholo, delayed the re-release by a few months. The unforeseen events delay the roll out of releases and all efforts are being made to ensure contingency plans are built into the model. Lead poisoning is one of the major threats to ground-hornbills for which we are constantly working to find solutions, for example through engagement with farmers and hunters and promotion of non-lead ammunition. During a later attempted augmentation of this group, the resident alpha female took a strong dislike to one of the young males released. She attacked him and in the battle he lost his transmitter. Despite being able to locate him the following day, he was not sighted since and is unfortunately presumed dead. Given that we still know little about the drivers of aggressive behaviour between individuals, aggression remains difficult to predict. The project currently has an MSc student undertaking hormonal research which will hopefully improve our understanding of social dynamics and behaviour such that management strategies can be developed accordingly.

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

1) The greatest success of the year gone by is the successful release of a group of four ground-hornbills onto Loskop Dam Nature Reserve, South Africa, and an area where the species had been locally extinct since the 1940s. The birds are thriving in their new environment - the reward of a massive collaborative effort between us and various institutions, provincial conservation authorities and the local community. We have just released a YouTube video about this release:

<https://www.youtube.com/watch?v=C1BYmUhpbc&t=34s>

2) We have managed to raise enough funds and produced draft architectural designs to begin construction of a centralised hand-rearing facility, known as the 'Baobab'. This will enable us to maximise production of release-quality ground-

hornbill chicks to allow reintroductions to happen at a scale that is meaningful at a population scale. We hope to commence Phase 1 of this project in early 2017.

<https://www.indiegogo.com/projects/restoring-africa-s-thunder-bird-or-ground-hornbill-africa#/>

3) We are thrilled to have been nominated for the award of South African Conservationist of the Year 2016. The nomination, together with the two associated television screenings, has brought a great deal of positive exposure for the plight of species and what our Project is trying to achieve to protect them.

<http://www.ann7.com/saty/ann7-conservationist-of-the-year/>

<https://www.youtube.com/watch?v=3VRbSTQ†T48>

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

The Loskop release effort has provided employment for two local community members as bird monitors, as well as helped to strengthen relations with the local community and provincial conservation authorities (Mpumalanga Tourism and Parks Agency) and personnel.

A number of alternate income generating programmes that have been launched using craft development to create jobs/ sources of income for communities sharing their immediate environment with these birds.

5. Are there any plans to continue this work?

Yes, we will definitely continue this work as re-wilding and reintroduction of southern ground-hornbills is the core mission of the Mabula Ground Hornbill Project, and given the longevity of the species a long-term conservation effort. The species is listed as Endangered in South Africa and Namibia and there is still much to be done to slow, halt and ultimately reverse population declines of this iconic savanna bird.

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

Project Manager, Lucy Kemp, will submit her PhD in December 2016, and plans to submit several articles from it for publication in peer-reviewed scientific journals in 2017.

Reports, print media and presentations – Regular report back of our activities to stakeholders and donors is achieved through dissemination of monthly, quarterly

and biannual reports. On occasion, we also publish articles in local magazines and newspapers, or give talks at workshops, public events.

Social media – Other media channels, such as Facebook and our new YouTube channel, are used to keep people updated on happenings at the project and release sites, as well as to educate people about ground-hornbills, the threats they face and why reintroductions are required to protect the species.

We plan to attend and present our work at the International Hornbill Conference to be held in Malaysia in May 2017. We are also going to host a Science Colloquium in 2017. Several collaborators will be invited to update the Population and Habitat Viability Assessment (PHVA) for the species based on research outputs in the region from recent years.

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 grant was used over one calendar year. The Project is on-going, given that the Southern Ground-Hornbill is a long-lived, slow breeding species, necessitating long-term conservation management.

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
Fuel	2500	2500	0	
Shepherd equipment and uniforms	1000	2600	1600	We need to support the monitors at the very difficult site with a quadbike and the safety equipment and maintenance costs increased this significantly.
Vehicle maintenance	1500	1500	0	
Tracking equipment	5000	5000	0	
TOTAL	10000	1160	1600	

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

The most important next step will be a Population and Habitat Viability analysis to re-assess all current conservation tools in the light of data derived from three PhDs and three MSc studies. This will lead to a revision of the species reintroduction protocol, which will also draw on the lessons we have learnt from reintroductions to date with a vision to ensure the persistence of southern ground-hornbills in the wild, especially in areas where they co-exist with humans.

Plans are already in motion to create a new 'bush school' in early 2017 and augment all existing groups. This new be the first to adjoin an existing 'bush school', with the aim of testing territory formation and movements in a re-colonising situation and establish cores that will be self-sustaining from a genetic flow perspective. We now have a new collapsible aviary for use at the next release.

Another important and exciting next step will be the establishment of the 'Baobab' hand-rearing facility to boost production of release quality chicks based on best practice. Although sufficient funds have been raised to begin construction, more funding is still required to complete construction, purchase equipment, buy food for the birds, cover daily running costs, veterinary care and financially support the staff who will run the centre.

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?

We display the RSGF logo on all our newsletters, biannual reports, on our website (as a major sponsor), on our sponsor page at the end of every presentation given about our work and on educational pamphlets designed for distribution in areas where the birds still occur outside of protected areas.

11. Any other comments?

Nothing other than a massive thank you from our whole team for the ongoing support – it has stabilised us and allowed us to expand in a sustainable manner.