

## 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>           | Aimee Oxley  |
| <b>Project title</b>       | Great Ape Conservation in the Matrix: investigating the impact of human activities on the socioecological adaptations of chimpanzees ( <i>Pan troglodytes schweinfurthii</i> ) in a forest-farm mosaic, Uganda |
| <b>RSG reference</b>       | 15900-1  |
| <b>Reporting period</b>    | June 2015-July 2016  |
| <b>Amount of grant</b>     | £4,886   |
| <b>Your email address</b>  | aimee.oxley-2014@brookes.ac.uk   |
| <b>Date of this report</b> | 8 <sup>th</sup> March 2017   |

**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  |
|---|--------------|--------------------|----------------|---|
| Assess the types and extent of human activities in protected and unprotected forest fragments |              |                    |                | I recorded human activities through a mixture of all occurrence data and habitat surveys (169 plots) in both sites - Waibira (protected continuous forest) and Kasongoire (un-protected fragmented forest) - and through additional transect surveys conducted monthly at Kasongoire. I have a good-sized data set to compare levels of anthropogenic disturbance between sites. Preliminary observations show a very low level of activities in Waibira as expected, since this was my minimally disturbed control site, although some evidence of pit-sawing and snaring was found in low densities. This compared to a very high level in Kasongoire, where humans are present daily harvesting timber for construction and firewood, guarding crops, setting traps and clearing forest for agriculture. |
| Assess the socio-ecological responses of chimpanzees towards human activities                 |              |                    |                | Data on activity budgets, feeding and ranging were successfully collected on both chimpanzee communities, in addition to time-matched habitat and human activity data. Analyses between communities and within Kasongoire will show whether chimpanzees show socio-ecological responses to different types and levels of human disturbances.  |
| How higher exposure to  |              |                    |                | Due to dense vegetation and   |

|   |  |  |   |
|---|--|--|---|
| <p>human activities affects stress-related behaviours</p>   |  |  | <p>habituation levels, we were unable to record focal data for long enough periods on one individual to achieve this objective as planned. However, video footage was taken systematically when chimpanzees were on the forest edge, and I will instead analyse vigilance behaviour in this risky environment.</p>  |
| <p>Which age/sex class engage and lead risky activities</p>   |  |  | <p>Data on chimpanzees leaving the forest edge supplemented by the video data will show which individuals leave the forest and lead when going to the village-garden matrix. In addition, a project investigating chimpanzee mango preferences and risk perception in the gardens was set up during the peak mango fruiting season. Whilst this project used indirect observations, chimpanzees were occasionally found in feeding in the trees during monitoring although the sample size for this will likely be too small for any significant results.</p> |
| <p>How social network analysis can be used as a conservation tool</p>   |  |  | <p>Since I was unable to collect sufficient focal data, it is unlikely I will be able to use social network analysis tools as originally planned.</p>   |
| <p>Provide the first long-term study of chimpanzees in Kasongoire, develop community workshops and train local assistants</p> |  |  | <p>This was the first in-depth study of the Kasongoire chimpanzees. Over the study period I employed and fully trained two assistants (see below for more information on this). I also held three community meetings and gave an education presentation to all the students at the primary school, where we discussed my research, preliminary observations and behaviour when encountering a chimpanzee</p>  |

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

Issues with long-term staff illness and bereavement at BCFS meant that I made the decision to focus more of my time and resources at Kasongoire than Waibira, which in turn led to focusing more project questions on Kasongoire, including the mango feeding project. Additionally, two bereavements caused the PI some time setbacks, meaning the project start date was pushed back and the overall study period was also extended.

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

1. The first detailed behavioural study of the chimpanzees at Kasongoire has been conducted and we now have an insight into their responses to the surrounding anthropogenic changes that have been occurring and increasing over the past decade. This important baseline data on the level of forest use by humans and chimpanzees, can contribute to more effective land management and conservation decisions.
2. An extremely dedicated person from Kasongoire is now trained in a variety of different data collection techniques. Balinda Kiiza Jovan came forward for the position to assist me in my research, having been a boda boda driver (motorbike taxi) and farmer previously. He is now proficient in his job, working to monitor the chimpanzees and the forest.
3. The community developed more positive attitudes towards the chimpanzees during the course of the study and are now more willing to work together to secure a better future for the chimpanzees, and to improve human-chimpanzee relations. There were some people, mainly men living close to the forest edge, that were at first hostile towards my presence in the village, despite the acceptance of the community elders and the community as a whole. However, by my final meeting in the village where I held a discussion of my preliminary observations, these same men welcomed me warmly and spoke of a future where we continue to learn about the chimpanzees and try to live together.

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

During the study I employed and trained three field assistants from Kasongoire village, two of whom – Jovan and Ben - are now permanent employees proficient in tracking and identifying the chimpanzees, and collecting behavioural, phenology and habitat data with the use of a GPS and an iPaq data logger. One assistant,

Godfrey, decided to go back into education during the course of the research and is now training to become a nurse.

Jovan and Ben are dedicated to protecting the forest and chimpanzees and act as the “go-to” people in the community for people who have information about the chimpanzees, for example if a chimpanzee is injured or nesting on the hill. They also travel around the parish following up reports of the chimpanzees when there is information of them ranging far from the forest.

This not only benefits my assistants as paid employees with a new skill set, but the rest of the community as they feel that there are people who know and understand the chimpanzees. During my closing meeting in the village many local people were happy to hear information and stories of the different chimps' characteristics: it made them feel more like they have neighbours they can identify with than pests that they want to get rid of.

I gained permission by landowners to work on their privately owned forests and whilst I was unable to prevent forest clearance entirely, I have built up a rapport to some degree with some owners who are reluctant to change their ways, paving the way for future efforts to prevent deforestation. Maintaining the forest benefits the whole community and those who have stopped can show an example to others.

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

Yes. My intentions are to analyse my results, write up my PhD thesis and two or three publications by September 2017 and then return permanently to Uganda to set up a long-term project in Kasongire. I would like to continue research to monitor and understand more about the chimpanzees, investigate new questions that have arisen from this PhD project, set up a community-based initiative to protect the forest, including a multi-stakeholder education and sensitisation project and restoring the derelict tree nursery to provide an alternative source for wood demands.

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

Initially, results will be written up as a thesis, then as a shorter report and as journal articles. Over the coming year I will submit three journal articles for review to share my results with the broader academic community. The shorter report will be sent to those working towards conservation goals in Uganda, including BCFS, JGI Uganda and local councillors, for dissemination with local council people at LC3 level and below. When I return to Uganda (after thesis hand-in) I will meet up with key figures in these organisations and councils to share my results and discuss ways forward.

Results with been shared at several conferences over the following 18 months where I will disseminate the results of this study, via poster or oral presentation, to both primate-specific and broader conservation audiences. Planned conferences include:

- Student Conference on Conservation Science, Cambridge (March 2017)
- Primate Society of Great Britain Spring meeting, Manchester (April 2017)
- European Federation of Primatologists Congress, Strasbourg (August 2017)
- International Primatological Congress, Nairobi (August 2018)

**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 Small Grant was used over the course of the project, from June 2015-July 2016. The initial project duration was 12 months, but fieldwork was extended for a month and a half (June-July2016) to increase my data set and in order to remain for the peak mango fruiting season. Since we were often unable to observe the chimpanzees in the afternoons when mangos began to ripen (from May onwards) I designed a technique to collect data on chimpanzee mango feeding preferences and risk perception through indirect observations. It then made sense to make this a full complementary data for the whole of the season, which lasts until mid-July. During this time costs were minimal: I lived in the village in a family home so the only extra cost was paying field assistants and changing flights.

**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   |
|----------------------------|-----------------|---------------|------------|--|
| Travel: flight             | 560             | 904           | +344       | Fieldwork extension = 1 one-way flight over budget.  |
| Travel: KLA-field site     | 400             | 100           | -300       | Travel was less risky than advised, a private hire was taken only once with large luggage. |
| Travel between field sites | 72              | 75            | +3         |  |
| Accommodation: KLA         | 210             | 160           | -50        |  |
| Camp fees                  | 1800            | 2150          | +350       | Increased camp fees since writing  |

|                          |             |             |           |   |
|--------------------------|-------------|-------------|-----------|---|
|                          |             |             |           | original budget   |
| Subsistence              | 300         | 320         | +20       |   |
| Assistant salaries       | 600         | 800         | +200      | An extra assistant was employed for habitat work and the mango project. |
| Logistics: visa, permits | 60          | 60          | 0         |   |
| Logistics: insurance     | 324         | 0           | -324      | This ended up being covered by the university                           |
| Logistics: anti-malarial | 150         | 120         | -30       |   |
| Equipment: filter        | 100         | 0           | -100      | Not required as I obtained one for free                                 |
| Equipment: field gear    | 310         | 200         | -110      | Cheaper than budgeted   |
| <b>Total</b>             | <b>4886</b> | <b>4889</b> | <b>+3</b> |   |

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

1. To maintain positive relationships with the villagers and local council leaders in Kasongore, and develop relationships with private landowners to minimise and prevent future forest clearance and strategies for re-forestation efforts.
2. To better understand the influence of incentives in deterring local people from clearing the forest. To date, an external conservation organisation was present in the area and distributed incentives (crop seeds, beehives, tree seedlings, livestock) but the effect of this in actually stopping deforestation is unknown. My personal observations indicate that it has not worked since some people who received incentives subsequently cleared forest. Understanding incentives and developing more long-term, successful alternatives with all stakeholders will be key to preventing further forest loss.
3. To invest further in indirect observational methods, including camera traps and passive acoustic monitoring, to further investigate both chimpanzee behaviour and human activities inside and outside the forest.
4. To understand the roles of custom and tradition between the people of Kasongore and the habitats and species surrounding them. The people of Kasongore have a history of land tenure issues, intertwined with Uganda's political history, the sugar company and a shift in tribal traditions as a result of both these former factors and changes in modern technology and society. An anthropological investigation to gain a deeper understanding of the relationships between individuals and the forest, chimpanzees (as well as other species), and hunting customs will help to shape more targeted and realistic conservation strategies that fit with the current and historical traditions of the local people.
5. In returning to Kasongore I will need to secure a base, as I cannot continue to live with a family in moving there permanently. The next steps will involve



securing some land to build a small accommodation and office, and registering the project as an official research project within the framework required by the Uganda Wildlife Authority and Presidents Office. I plan to train an additional assistant in field data collection as well as teach Jovan skills including using a computer.

6. I will strengthen my links with the local school as well as increase my reach to the school the other side of the hill. This area is still in Kasongore parish but the forest fragments are disappearing much faster. Whilst the chimpanzees' core range is in Kasongore village and they range on this side of the hill rarely, when they do come to these areas it is much more risky. Therefore increased investment into talking with locals and engaging children in school will target those using illegal trapping practises and cutting down forest.

**10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?**

Yes, I have given a few internal presentations at Oxford Brookes University and Budongo Conservation Field Station where I acknowledged my support from The Rufford Foundation with the Rufford logo. When I present my results in posters and oral presentations at conferences I will use the Rufford logo in acknowledging your support. In all publications arising from this study period, I will acknowledge the financial support of RSGF.

**11. Any other comments?**

I feel like this research has been extremely important, especially considering how dramatically the landscape has changed over recent years and how little forest is left to support chimpanzees in fragments, such as Kasongore. Similar nearby fragments are being or have been cleared, meaning more people look to Kasongore forest fragments as a source of fuelwood and timber. The population is further increasing, leaving a pretty dire future for these chimpanzees, and the other species in the forest. The micro-climate is even changing noticeably with rains not falling in the fragmented areas when expected, when rains still fall at Budongo, 15km away. People are becoming aware of these problems, but I only hope that enough forest is left for future generations of both humans and chimpanzees to survive and thrive. I started this project because I was passionate about it, and I hope that by conducting this research for my PhD and continuing it by returning I may help the plight of the Kasongore chimpanzees and translate this research and my experiences into effective conservation strategies for chimpanzees in other human-modified landscapes.



Conducting a longer-term study and developing relationships with people in the village has advantages far more important than creating a big data set and making friends! It might seem obvious, but spending time in the village (staying for a chat with locals, buying their small produce) and sleeping there (rather than the research station) really helped bolster a good relationship with local people. When they learnt more about how we share things in common, simple things like that I ride a bicycle and eat maize in England, rather than focus on how different we are, with me carrying around my binoculars and wearing trousers, then the level of respect and understanding only goes up. This respect goes both ways: from the researcher truly understanding and sympathising with the problems of the villagers - albeit that those problems may include a fear, or even hatred, of the researcher's study animals - but it also helps the researcher being understood and listened to by local people too. I think this point is worth making since so often researchers fly in and out, and sometimes this cannot be helped for time reasons, but I think conservation on the ground would be greatly improved if lessons could be learnt from this.

I am very grateful to The Rufford Foundation for helping to support this research. Many thanks.