

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	Lynne R. Baker, PhD
Project title	Threatened Primates of Nigeria: Conservation of Sacred Monkeys in Igboland and a Relict Population of Chimpanzees in the Niger Delta
RSG reference	32.02.10
Reporting period	Summer 2010–Summer 2012
Amount of grant	£11,394
Your email address	lynnerbaker@yahoo.com
Date of this report	August 2012

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
Collect oral histories from community residents to document and preserve local folklore regarding threatened sacred monkeys (Sclater's monkey).			X	See notes below.
<p>Transcribe oral histories and officially bind these as individual oral memoirs.</p> <p>Translate key excerpts from oral histories into Igbo. Publish full-colour brochures in both Igbo and English languages for pride-building and conservation awareness.</p> <p>Distribute brochures in each community (Lagwa and Akpugoeze).</p>			X	<p>The Akpugoeze brochure (1,000 copies) was published in both Igbo and English. The Lagwa brochure was published in two versions: Igbo-only (250 copies) and English-only (1,000).</p> <p>Brochures and bound copies of oral memoirs were distributed in each community in August 2012.</p> <p><i>Please see e-versions of printed brochures.</i></p>
Conduct censuses of monkey populations in Lagwa and Akpugoeze to monitor trends.			X	See notes below.
Physically map potential habitat corridors between Akpugoeze and the neighbouring region.			X	No mapping was conducted in Lagwa, given that this community is severely deforested and surrounded by other communities also lacking forest cover.
Acquire high-resolution (0.5m) satellite imagery of the Akpugoeze study region.			X	<p>Imagery, obtained from GeoEye, will be useful for landscape conservation planning.</p> <p><i>NOTE:</i> This step was added to original proposal with permission from Rufford.</p>
Determine continued presence and distribution of chimpanzees (<i>Pan troglodytes</i>) in the Okoroba		X		See notes below.

community forest, Bayelsa State (Niger Delta), and collect faecal material for genetic analysis.				
Develop and conduct environmental education workshops in primary and secondary schools in Lagwa and Akpugoeze.			X	NOTE: This step was added to original proposal with permission from Rufford.

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

Some oral-history interviews were conducted at the request of the traditional rulers of the communities; data from these interviews generally proved less informative given that, for political reasons, the interviewees were conducted to accommodate our community hosts.

The Baylor Institute for Oral History originally projected it could transcribe all interviews, collected in the summer 2010, by November of the same year. However, due to the unfamiliar language and complexity of the interviews, the last transcription was completed in June 2011. The interviews were then edited and analysed, including preparing excerpts for the conservation-awareness brochures. Thus, the Igbo translation and printing of the brochures were in turn delayed and could not be completed in time for the summer 2011 field season. Summer 2011 activities instead involved the development of environmental education programs for primary and secondary schools in two communities. The next available time for distribution of the brochures by the project leader was August 2012, thus this project was wholly concluded this month.

Given the ongoing insecurity in the Niger Delta region and concern over accessing the study area during the heart of rainy season (May–August), the chimpanzee survey was scheduled during the dry season, with Nigerian scientists as team leaders. They were able to collect just two faecal samples, which were sent to Dr. Katy Gonder’s lab. They confirmed through local reports the continued presence of chimpanzees, but were unable to detect them directly. This is likely an indication of the very low abundance of this remnant population. The faecal samples have yet to be analysed, due to lab scheduling issues. Dr. Gonder has indicated she intends to analyse the samples as soon as is possible.

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

Oral History Interviews

Sclater’s monkey (*Cercopithecus sclateri*) is a globally threatened species (listed as [Vulnerable by the IUCN](#)) and is endemic to southeastern Nigeria. In Lagwa (Imo State) and Akpugoeze (Enugu State) communities, populations of this species are considered sacred, linked to indigenous religious beliefs and folklore, and are informally protected by associated taboos. The beliefs that confer protection on the monkeys are eroding due to the monkeys’ crop-raiding behaviour, as well as the influence of outside (Western) religions and cultures and modernization. Nevertheless, indigenous beliefs have endured among individuals to varying degrees, and the monkeys continue to live commensally with people. Local monkey folklore is not written down; previous research has shown that the youth of the communities are not well aware of the unique stories regarding the monkeys.

Therefore, in this project I documented local folklore regarding the origin of the monkeys' sacredness and their role in daily and spiritual life, as well as local understandings of perceived and real changes in the community due to religious and social change over time. I conducted 19 semi-structured interviews ($n = 10$, Lagwa; $n = 9$, Akpugoeze; one interview in Akpugoeze involved two people) using a mix of closed- and open-ended questions. An Igbo translator was present for all interviews when the respondent did not speak English. All interviews were recorded and interview data forms completed, per protocol set forth by the Baylor Institute for Oral History. Following initial transcription, I reviewed and edited each interview. Final transcriptions were officially bound with engraved lettering on the bindings by the Baylor Institute for Oral History.

The oral-history interviews provided insight into a complex scenario in which indigenous and more recent religious and cultural beliefs exist in often uneasy syncretism. For most interviewees, the widespread adoption of Christianity within their community is viewed as very positive, although some lament the loss of customary Igbo events and practices as a result. Respondents often noted that certain indigenous practices continue "behind the scenes." In addition, the monkeys, while having totemic status for many residents in Lagwa, are widely considered to be pests in both communities due to their crop-raiding behaviour. Some residents suggest they should be killed. However, there is a general reluctance to do so. Reasons cited for this reluctance include fear of supernatural retribution, community condemnation, or financial responsibility (to pay for a monkey's burial).

Key excerpts from the interviews, along with previous interview data collected in the study sites in 2005–2006, were compiled into 8-page, full-colour brochures. The Akpugoeze brochure (1,000 copies) was printed in both Igbo and English. The Lagwa brochure was published in two versions: Igbo-only (250 copies) and English-only (1,000 copies). The printed brochures and bound copies of the oral memoirs were distributed to community members in August 2012. (Please see attached e-versions of these brochures.)

Censuses of Monkey Populations

To estimate abundance of the monkey populations in Lagwa and Akpugoeze, I attempted to make total counts (or censuses). In these sites, most monkey groups have long been habituated to human presence and thus are readily observed, making a census a feasible approach. (In Akpugoeze, to make comparisons with previous censuses, I differentiated counts of groups found in a core survey area — primarily within the two Akpugoeze villages that strictly protect monkeys.)

Population increases were recorded in both communities: a 66% increase over 4½ years in Lagwa (from 124 to 206 individuals) at an annual rate of 10.2%, and a 29% increase over 4 years in Akpugoeze (from 193 to 249 individuals) at an annual rate of 5.7%. Mean group size also increased in both sites. Density in Lagwa was 24.2 individuals/km², and density in a core survey area of Akpugoeze was ~36–38 individuals/km². Such population growth, while encouraging, will likely exacerbate human-monkey conflict and thus should be understood in terms of potential socioeconomic impacts.

The census results reported here may have been affected by monkey ranging and grouping patterns and improved detectability due to a revised census technique, which included secondary observers. With further work on methodology for censusing commensal populations, techniques can be refined and customized to individual sites for more accurate estimates. This investigation of Sclater's

monkey in Lagwa and Akpugoeze, two sites critical for conservation of the species, indicated that both of these populations have increased, and neither faces immediate risk of extirpation.

Habitat Mapping

Using Global Positioning System (GPS) tracking, I investigated potential habitat corridors between Akpugoeze and neighbouring forest patches. Accompanied by a local guide, I walked and mapped ~27.5 km in Akpugoeze, focusing on forested areas in the western side of the community. This side connects to the Mamu River and the Mamu River Forest Reserve, which is shared by Enugu and Anambra States. This effort revealed the presence of previously undocumented Sclater's monkey groups along the periphery of the community, in Akpugoeze villages that traditionally do not consider monkeys sacred. Outside the core survey area, I observed at least seven monkey groups; two were mixed-species groups containing *C. sclateri* and mona monkeys (*Cercopithecus mona*).

For the mapping activity, I focused on Akpugoeze given the relatively moderate amount of forest cover remaining across the landscape. In contrast, Lagwa is mostly devoid of natural forest, is dominated by oil palm trees, occurs in a very human-dense region, and is surrounded by farmland and other communities.

The recent acquisition of high-resolution satellite imagery for Akpugoeze will enable the overlay of monkey sighting data with forest cover and these mapping data to better assess landscape-level patterns of land use and connectivity, potential sites for restoration, and habitat-use patterns of Sclater's monkey.

Chimpanzee Survey (Bayelsa State, Niger Delta)

In January 2011, project team members Dr. Oluseun S. Olubode and Adebowale A. Tanimola conducted a chimpanzee (*Pan troglodytes*) survey in the Niger Delta (Okoroba community forest, Bayelsa State). They confirmed the continued presence of chimpanzees through local reports and collected faecal samples for genetic analysis. They were able to collect just two samples, which were sent to Dr. Gonder's lab in New York.

The lack of direct detections and hardship involved in locating faecal samples from this region are likely an indication of the extremely low abundance of this remnant population (which was estimated at no more than 50 individuals nearly 15 years ago). Additional work is urgently needed to investigate the actual status of this population.

Environmental Education Programs

Summer 2011 involved the development and implementation of an environmental education workshop for primary and secondary schools in Lagwa (Imo State) and Akpugoeze (Enugu State). Abakum Bassey Owai, education officer at CERCOPAN (Centre for Education, Research, and the Conservation of Primates and Nature) in Cross River State, Nigeria, was hired to assist with the program. Mr. Owai has several years of experience working with schools and conservation clubs in Cross River State. In Akpugoeze, the program was conducted at 5 primary schools and 2 secondary schools, and at 7 primary and 2 secondary schools in Lagwa.

The program covered such topics as environmental services, pollution, primates (with a focus on Sclater's monkey), and the concepts of endangerment and extinction. As part of the program, children played a "chutes and ladders"-type board game that addressed major threats to primates and their forest habitats. They also took a quiz based on the main lecture, and those who scored

highest won a prize (such as “100 Facts about Monkeys and Apes” and “100 Facts about Endangered Animals” books). Not only did the schoolchildren learn new ideas and concepts, the many teachers and other community members who attended the presentations informed us that they did as well. They encouraged us to return to conduct similar programs for the entire community.

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

Most aspects of this project required local community involvement. For example, 10 secondary observers were hired and trained as part of the primate censuses; local residents, primarily community leaders, elders, and traditional religious leaders, comprised the focal group for the oral-history interviews; and the environmental education programs reached hundreds of children in a total of 16 primary and secondary schools. Given that Sclater’s monkey has no official protection across its range, the cultural/local protection afforded to this species by the residents of Lagwa and Akpugoeze means our work in these sites involves significant community involvement.

5. Are there any plans to continue this work?

Research and conservation efforts for Sclater’s monkey and its habitat in Lagwa and Akpugoeze are ongoing. The Rufford Small Grants Foundation has been a vital sponsor of these efforts over the past several years.

In addition to continued population monitoring, I plan to investigate crop-raiding activities by the monkeys to better understand this widespread problem. Previous research has shown that nearly two-thirds of the local residents who said they did not prefer the monkeys’ presence indicated that they would be inclined to change their minds if monkeys no longer damaged their crops (Baker, 2009). Consequently, studies of crop raiding, including its effect on the livelihoods of people and methods for effectively deterring monkeys, deserve special attention. Informed mitigation measures can then be developed and implemented. Ecotourism programs have been suggested as a way to help compensate the communities for crop damage by monkeys. However, such an idea needs to be carefully considered for southeastern Nigeria. This region has been recently plagued by kidnappings for ransom. As a result of ongoing social and political instability in the country, Nigeria may not be able to sustain even a small-scale ecotourism project in the region.

Other forthcoming research should focus on disease ecology, particularly the potential for bidirectional pathogen transmission between primates and humans. Studies have shown that close associations between humans and sacred, pet, or temple-dwelling primates can result in parasitic and viral transmission.

Other activities relevant for the conservation of these important populations include development of ongoing environmental education programs for both adults and children, as well as programs for church leaders and congregations to encourage a dialogue on the Christian principle of environmental stewardship. Environmental education programs conducted as part of this project could be expanded to include establishment of conservation clubs, environmental clean-up, and reforestation activities. The need also exists for habitat restoration and reforestation to, for example, control erosion and increase connectivity with neighbouring forested areas.

Baker, L.R. 2009. Sclater's Guenon in Nigeria: Outlook Good or Just Hanging On? Ecological and Human Dimensions of Hunted and Sacred Populations. PhD dissertation. University of Minnesota, Minneapolis.

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

Research data are being prepared for publication in international, peer-review journals and/or presentations at scientific and conservation conferences. The brochures and bound oral memoirs have been distributed to the local communities and will be disseminated to colleagues and other members of the conservation community. E-versions of the brochures can readily be circulated via the Internet or Email. The oral memoirs are also available for review via the Baylor Institute for Oral History.

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 June 2010–August 2012. With permission of The Rufford Small Grants Foundation, the project period was extended to August 2012 due to delayed transcription of the oral-history interviews (see explanation in #2 above). Igbo translation and printing of the brochures were in turn delayed and could not be completed before the 2011 field period. Unspent funds (£2560) from this RSG grant will be used for future site visits, transport of brochures, and continued research and conservation activities (see #5 above).

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.

NOTE: Due to the addition of activities and programs as part of this grant, the budget will reflect costs according to programs/field seasons. Funds were conserved due to occasional support (transportation, food, and accommodation) by local host communities, exclusion of the genetic analysis, and frugal spending.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Equipment/supplies for primate surveys and collection of oral-history data.	240	359	-119	Original budget underestimated supplies needed.
Chimpanzee survey (Niger Delta), including local transport, food, accommodation, local salaries, faecal collection materials, laboratory genetic analysis.	2055	787	+1268	Lab analysis was not conducted and will be done at a later date by Dr. K. Gonder.
Satellite imagery.		1408		This element was added. It was easily accommodated by the grant balance.
Environmental education programs, including international		3311		This element was added. It was easily

and domestic travel, prizes, supplies, food, accommodation, local salaries.				accommodated by the grant balance.
Printed brochures and bound oral-history memoirs, including design, translation into Igbo, printing, shipping/ excess baggage, domestic travel, supplies, food, accommodation, salaries.	2800	2969	-169	
Total	11394	8834	2560	

Original budget was based on exchange rate of 1 GBP = 239 Nigerian Naira; 1 GBP = \$1.44 US.

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

Please see #5 above.

In addition, I hope to allocate a portion of the grant balance to partially support a documentary TV crew from [Goge Africa](#). Goge Africa produces half-hour TV programmes on culture and travel in Nigeria and throughout Africa. Its programmes are seen Africa-wide, as well as in >50 countries in three countries. Goge Africa would like to produce a documentary on Lagwa and Akpugoeze, the monkeys, and the work we are trying to do. This can contribute to conservation in several ways, including: 1) increase awareness within Nigeria and in other countries about these important communities, 2) increase awareness within the two communities about the rarity and uniqueness of the species they harbour, 3) highlight how traditional taboos can contribute to conservation, and 4) help us garner support for future efforts in these sites. If this documentary is successful, Goge Africa will recognize Rufford in all of its programmes about these sites.

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. Research data are being prepared for publication in international, peer-review journals. As in the past, Rufford will be appropriately acknowledged in journal articles, as well as in presentations, such as those made at scientific conferences by the grantee. Results of the interview data were compiled and distributed to Lagwa and Akpugoeze in the form of full-colour brochures. The brochures will also be sent to colleagues and other members of the conservation community. Rufford (including the Rufford logo) is acknowledged on the back page of all brochures.

11. Any other comments?

Sincere appreciation goes to The Rufford Small Grants Foundation for its crucial continued support of research and conservation activities for the threatened Sclater's monkey in southeastern Nigeria.