

Final Project Evaluation Report

Your Details	
Full Name	Simo Talla Franklin
Project Title	Pangolin Population Status in the Forest versus Savannah Habitat in the Mpem et Djim National Park, Cameroon
Application ID	26653-1
Grant Amount	£5000
Email Address	franklinsimo77@gmail.com
Date of this Report	November 2019

1. 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
Documenting with pictures the pangolin species that occur in the Mpem et Djim National Park using camera traps;				Though we did not provide any documentation of the black bellied pangolin, we believe that this species might not be present in this protected area. During the household survey, whereas a couple of locals claimed to know this species under the name "le petit pangolin", we think they were just confusing because they also use this same name for the white bellied pangolin.
Giving a relative abundance of the pangolin species and their occupancy information between the forest and the savannah area in both the dry and the rainy season in the Mpem et Djim National Park				The method used during this project was not appropriate to evaluate relative abundance of pangolins population. Also, additional objectives including the household survey and the awareness raising campaign, have resulted in very limited fund and we were able to assess pangolin population of the MDNP only during the rainy season for this project.
Developing a distribution map of the pangolin species in the study areas, this will contribute in mapping out pangolin strongholds and areas in which to focus pangolins conservation efforts;				Here, we provide information on the white bellied and giant pangolin distribution between the forest and the savannah together with a map showing burrow distribution in the savannah part of the investigated area.
Giving an approximation of the encounter rates of signs and the detection probability (using camera traps) of pangolin on their assumed pathway (dead trees with termites and signs of pangolin activities) in the Mpem et Djim National Park;				We did not do a signs-based survey because pangolin signs are very challenging to identify and even controversial. The smaller pangolin hardly left signs that can be identified and also assumed signs of this species is very similar to those of other species like the porcupine the wild pig and the mongoose and so is those of the giant pangolin with the aardvark. However, for this latest, we evaluated burrow

			density as the number of refuges available for the species in the study area.
Establishing any correlation between the detection probability of pangolin with the camera traps and the distance from protected area settlement edges, distance from the nearest main water body;			This objective was not achieved because it requires a different design for camera traps placement which could not be met by the one, we used in this study. This can be done as another whole project
Additional objective: Household survey to evaluate hunting habit of the local people around the Mpem et Djim NP			This objective was totally achieved, and we are grateful to the Rufford committee that suggested it to us after the first submission of our project. This questionnaire survey helps us to also understand from locals' areas of the park where we can find each species of pangolin and where we also conducted this survey and got evidence from camera traps.
Additional objective: Awareness raising campaign about the importance of conserving pangolins			This objective too, was also fully completed and thanks to the Rufford committee once more who suggested it to us. We took the opportunity of the 2019 world pangolin day to make an awareness raising campaign in the biggest village around the Mpem et Djim National Park, Linté. This started with a social media campaign on the national television (CRTV) and ended with some activities with locals including a pangolin lecture to inform, educate, and touch the hearts of community inhabitants and children, a sport walk to call the attention of onlookers and spread the pangolin message, a football match to enhance collaboration between wildlife officials and the local population. This really help us to be familiar with local people of this area and to build trust with them. We also believe that this further help for none of our camera trap being stolen away in the field by locals because they really supported our project.

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

We faced the reluctance of some local inhabitants during the questionnaire survey, but we fully understand their rights to answer or to resign our questions, so they were asked at each level of the questionnaire if they wish to continue or to leave the questions. We also introduced ourselves first to the traditional rulers of each village using our research permit and academic registration sheet and once they were briefed on the importance of our project, they used a messenger to spread the message of our survey in the village before we start. All the traditional rulers around this area were favourable.

It also happened during the field survey that two of the new camera traps we bought were not functional. Thanks to the Zoological Society of London ZSL-Cameroon which supported us with some spare cameras.

We were not able to run analyses between pangolin detection from camera and distance from protected area edge of settlement and distance for the nearest water point. Also, we did the survey for only the rainy season and the dry season were not included. We think that another project is required to answer these questions for pangolin which are still one of the least known and studied species.

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

1. The local people of the area where we conducted our survey were sensitised on the importance of preserving pangolin in their environment. Some of them did not know before our project how pangolins could be important for them apart being consumed as wild meat. They were reminded during the lecture about the cultural value of pangolin and their role as ants and termites' regulator in the wild as these latest species are considered a pest for them, the majority being cocoa farmers. They were further very willing to continue wearing the t-shirt we gave to them, this to continue spreading the pangolin message around to other villages.
2. Our major finding for pangolin during this project was to contribute in improving the method for the white-bellied pangolin monitoring in the wild by proposing an area that allows detection of this species with good detection probability and also we gained insight into pangolin distribution in the Mpem et Djim National Park. We are currently writing an article on this issue and we will publish it in a respectable journal. We also document during this survey a very rare species which was even believed not still occurring in this protected area, the African golden cat. We published an issue with that to CATnews journal. We will attach it to this report.
3. We also provide documentation of pangolin species of the Mpem et Djim national Park using camera traps and located areas where to focus conservation efforts for pangolin population in this protected area. We understand that this may not be the only areas in this park to harbour pangolins but it has proven already very useful to the Conservation Service of the park to be informed on the areas of the giant pangolin burrows

distribution for their anti-poaching patrol as this species is largely coveted by poached for its larges and lucrative scales.

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

Local people were a little bit reluctant during the questionnaire survey as they were all aware that pangolin is a fully protected species and were also thinking at the first place that we were collecting data for the Ministry of Forest and Wildlife. However local people were let the liberty of responding or not responding to our questions, they were also asked at any stage if they want to continue. Some resigned but the majority completed the whole questionnaire as long as they were convinced that we were not working for rangers but for academic purposes. The awareness raising campaign and the pangolin entertainment have been appreciated by the whole village and from children to older persons, everybody was involved, and many confessed they had never witnessed such activities. They are now informed that a whole day in the world is dedicated each year to pangolin protection and we are receiving feedback from them being already waiting for us for the upcoming world pangolin day to come again in their village.

The Mpem et Djim National Park Conservation Service was also very happy with the unfolding of these activities and promised to continue spreading the pangolin message.

5. Are there any plans to continue this work?

We are planning to carry out this same survey during the dry season to understand the effect of seasonality on pangolin presence in the wild and subsequently on pangolin harvesting, many people around the village having declared that pangolin were easier to find during the dry season and we don't know the drivers or this situation. We will also test this method in another protected area. We also plan to investigate in the future into other drivers of the pangolins' presence. We also plan to establish a pangolin lover club in the village were we worked during the upcoming world pangolin day so that they will continue the work after our project end in this area because we believe that people don't protect a species because they have to do it but more because they want to do it.

We did not document the black bellied pangolin during our survey thought this species is believed to occur in Cameroon. We are also looking forward to assessing where the black bellied pangolin species in Cameroon are, and to document this species in the wild using camera traps. We also have as future plan to do the first ever comprehensive survey using camera trap of the mammalian fauna of this park, which is unknown to date and result in little consideration of this park at national and even international level since no international NGO is based in this protected area and no management plan is available to the park wardens.

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

The report will be submitted to the Rufford Foundation and published on our page in the RSG website. We have a network of people working on pangolin in our area called "Pangolin Conservation Network". This finding will be shared with them and we hope this work will help to facilitate pangolin monitoring by other researchers and allow many more answers to be given on pangolin ecology. Also, we plan to publish these results in a respectable journal maybe, not open access, this to prevent sensible information in this paper concerning area in the wild allowing pangolin detection with good probability to fall into poachers hands and instead facilitate pangolin hunting and depletion in their range. We also plan to apply to future international conferences to share our results. As part of our contract with the Cameroon Ministry of Forest and Wildlife as well as the Ministry of Scientific research and Innovation, the research permit delivering was conditioned with providing of feedback of our project to them in the form of a short report. These results are of course part of our PhD thesis at the University of Yaoundé 1 Cameroon.

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

After attribution of the RSG on October 8th, 2018, the funds were successively received on November 21st, 2018. We are happy that in spite of additional objectives, the final report was submitted on November 8th, 2019, so the project was carried out within 12 months as in the anticipated length of the project.

8. Budget: 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. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Household survey		£953	+£953	This was not budgeted at first place but was subsequently added on the foreseen expenses. This include money for transportation, accommodation, feeding for the entire team, payment of the local guides, fees for the research authorisation and questionnaire printing.
Awareness raising campaign		£1557	+£1557	This include money for transportation, accommodation, feeding for the entire team,

				payment of fixers, fees to get the authorization for the manifestation on the world pangolin day, tee-shirts flyers and banner printing.
Purchase of 20 camera traps (Bushnell aggressor) and 20 SD card.	£3000	£2681	-£319	We change the initial camera trap brand and model to buy Bushnell aggressors that were of the very good standard too by slightly cheaper in term of price this to save money for other activities of the project
Food during the fieldwork for the entire team	£400		-£400	Was supported by external funding
Local transportation	£600		-£600	Was supported by external funding
Field accommodation				Was supported by external funding
Salaries: Per diem for one assistant, three porters, one guide and one ranger for two rounds of fieldwork	£1000		-£1000	Was supported by external funding
Total	£5000	£5190	+£190	Was supported by external funding
External amount	\$5000	\$5000		This has contributed in part of the charges for camera traps establishment and retrieval including transportation, food, accommodation and salaries

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

We will test the monitoring method developed during this project in the dry season to understand the effect of seasonality on the pangolin presence in the wild. Lin, 2011 noticed that the use of structure such as tree and rock by arboreal and semi arboreal pangolin species may differ by season. So, we will test in the usage of fallen logs by the tricuspis pangolin differ by season and additionally include another protected area with different status. We will set a pangolin lover club in the village where we have been working during the upcoming world pangolin day so that they will continue the work after our project end.

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

We used the Rufford Foundation logo in public presentation we gave during the project and we will continue to do this if we are invited to present our work. The logo

has also been used on the banner, factsheet, jerseys and t-shirt poster we made for the 2019 World pangolin Day. Also, we properly acknowledged The Rufford Foundation financial support in the paper we recently published reporting the African golden cat presence in Mpem et Djim NP. This acknowledgement is also included in our publications in preparation.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Difouo Fopa Ghislain (Project assistant): He helped and assisted with the setup and deployment of 19 camera traps in the savannah area and 30 camera traps in the forest area of the Mpem et Djim NP, this included programming cameras, helping identify suitable locations for placement from wildlife spoor, ensuring consistent placement of cameras whilst adhering to deployment protocols. He also helped in data collection during the community-based survey and is currently involve in article writing. He helped with the preparation and organization of the activities during the awareness raising campaign.

Ichu Godwill (Project advisor): He helped with the development and implementation of our protocol in the field by providing us with advice. We also joint our effort together to organize the 2019 World Pangolin day at Linté and reach more people during the awareness raising campaign.

Talla Valery Nobel (Project assistant): He helped in data collection during the community-based survey

Koni Serge and Galandi Bertin (Eco guards): They helped in the field with transportation of camera traps and batteries and also ensure the protection of the team on the field.

We also acknowledge **Ndjibe Issa, Ngomane Lazard, Ngoura Jean Bosco, Ngomane Pierre and Djiety** for help in the field. They were involved as porters and guides during each step of this project

12. Any other comments?

We wish to thank The Rufford Foundation for supporting this project, which has helped us to contribute in improving the method for white-bellied pangolin monitoring in the wild and also to gain insight into the giant pangolin ecology in general and in Mpem et Djim NP in particular. We also express gratitude to the Conservator of the Mpem et Djim NP M. Bisseck Jean Pierre for the facilitation and support during the field work. Finally, we like to say that pangolin conservation in Cameroon requires more actors to tackle the huge threat this harmless species is facing today. The species has proven very challenging to monitor in the field as well as in wild meat markets, but we believe that with more people involved, more projects dedicated to pangolin protection, science and enforcement are the way to help this species persist in the wild.