

Final Evaluation Report

Your Details						
Full Name	Tsetagho Guilain					
Project Title	Conservation Status of the iconic Grey-necked Picathartes (Picathartes oreas) and initiation of community-based conservation outreach in Cameroon					
Application ID	31677-2					
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Email Address	gtseguil@yahoo.fr					
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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
Update information on breeding population status and distribution of the species in Mounts Mbam-Minkom and Nlonako forest.				In early July 2020, laminated photographs of the bird were used to conduct interviews in communities adjacent to the study area (12 in Mbam-Minkom site and five in Nlonako site) for the clues on picathartes potential breeding sites. A systematic search was conducted from April-May 2020 and July-December 2020 targeted at, but not limited to, sites where local communities reported picathartes presence, points from previous research done in the area, valley slopes and overhanging rock. As results, 106 breeding sites were found in the Mount Mbam Minkom forest, with a total of 158 nests. Thirty of these nests showed signs of breeding activity with an estimated population of 60 breeding individuals following Awa II et al. (2009) who considered each active nest to hold two parents. Our estimated population size shows an increase of 16 active nests compared to results obtained by Taku Awa II in 2005 (Taku Awa et al., 2009). They found 22 nests with signs of breeding activity and estimated the population of the species at 44 breeding individuals in the entire Mbam-Minkom Mountain Forest. Out of the 30 active nests, one was recorded at a site earmarked as a potential breeding site by Taku Awa in 2005 (Taku Awa et al., 2009) and five of the active nests were at newly discovered sites not recorded in 2005. These new findings might have been the cause of the increase in the population of the GNP in the Mbam Minkom Mountain Forest from 44



	breeding individuals in 2005 (Taku Awa et al., 2009) to 60 in the present study. Taku Awa et al. (2009) reported that
	some nests were used twice by GNP during a breeding season. We
	recorded one such behaviour in which
	April/May 2020, nothing in the nest in
	July 2020 and two nestlings in the same
	Nongko we found 13 colonies with
	eight active breeding nests from eight
	sites giving a population of 16 mature individuals.
	We didn't reach some places in Mount
	Nionako due to inaccessibility and
	survey these places. Further work will
	thoroughly investigate these places.
Update threats on the	During the study, camp fires (used by
study area	set in the nesting colonies were found
	as new threats on the species
	population in the study area (Mounts
	Mbam-Minkom and Nlonako). It is the
	anthropogenic threats in Cameroon
	Shifting agriculture and non-sustainable
	logging were also found. The intensity
	of each threat was quantitatively and
	that the most threats occurring there
	are shifting agriculture and logging.
	Most of the nesting sites recorded by
	Taku Awa in 2005 (Taku Awa et al.,
	completely destroyed due to
	agricultural encroachment, logging
	and hunting to a lesser extent. The
	Increase in agricultural activities and
	degraded forest and restricting the
	birds to relics of gallery forests around
	rocky outcrops. Logging has continued
	in the tringe village of Ngoas due to
	improvement in road network which
	makes it possible to transport products
	to Yaoundé city. This probably explains



	why most of the nests in this village appeared abandoned, dormant or partially or completely dilapidated. The approach of tele-detection was used to quantify changes in the habitat of the grey-necked picathartes in the Mbam Minkom mountain forest and showed a 24.8% decrease in the surface area of dense forest between 2005 and 2020 while in the same period, the surface area of degraded forest, farmlands, bare soil and built-up area have increased by 18%, 6.2%, 2.9 % and 0.15 % respectively.
Train dedicated youths as picathartes monitors	Field guides recruited in each of the 17 communities were trained as picathartes monitors. During the survey, they were really keen to learn and presently available for future monitoring as well as other research works that will be done in the area. Also, a master's student, Yangsi Terrence Kidia from the University of Yaoundé1, received intensive training and he used part of our results for his master's thesis defended early in January 2021.
Assess attitude and perception of local population towards the Grey-necked Picathartes	From February to early June 2021, we distributed 238 questionnaires in 17 villages bordering the two study sites. With time constraints, simple descriptive analysis was done for the sensitisation campaign. Data are currently being analysed in view of preparing a manuscript for submission to a peer- reviewed journal. I expect to complete the analysis in the end of February 2022 and submit the manuscript by May 2022.
Raise awareness and education campaign in local communities and school.	From June to July 2021, after field survey and administration of questionnaires, conservation education and awareness campaigns through workshops and nature classes were held in each of the surveyed communities, where we presented the results to engage local communities and students in biodiversity conservation, as well as highlight the negative effects of unsustainable use



		of their natural heritage. During these activities we emphasised the sustainable use of their natural resources, the protection of the species and its habitat as well as the protection of other species sympatric to the grey- necked picathartes. Collaboration with the local chiefs prompted most inhabitants to attend the workshops. We printed 300 t-shirts, 350 flyers and 250 copies of our conservation awareness posters and distributed in all surveyed communities. Flyers were distributed during awareness meetings with communities. To reach a wide audience, some posters were posted in public places including drinking points and other areas that are frequently visited by villagers such as meeting hall, marketplaces and church. Also, a sensitisation radio programme on "the importance of biodiversity conservation" focussing on the grey- necked picathartes was held at the Cameroon Radio and Television (CRTV), Littoral regional station, through the Bio-Littoral weekly program presented by Miss Louanga Esther. This also targeted a wider audience within
		programmes should be implemented in the area on a regular basis.
Present findings at symposia and international ornithological conferences, with results published in peer- reviewed journals.		Due to the COVID 19, most conferences were cancelled. We hope that the situation will be stable in 2022 and then we will present our findings this to at least one national and one international conference. Also, in collaboration with the Ebo Forest Research Project, we just completed the grey-necked picathartes monitoring in Ebo forest, and we have already started with data digitisation that will be completed soon and, coupled with fieldwork data from this project, we are expecting to be through with data analysis in March 2022 and to submit a manuscript to a peer reviewed journal by April 2022. In



		addition, data on questionnaires will be completed by March 2022 and a manuscript submitted to a peer reviewed journal by May 2022.
Identify priorities for further research and conservation management activities.		Preliminary results from this work coupled to our observation from the field allow us to propose that further research should be to investigate: 1) the dispersal ability of the species in the area; and 2) investigate the reproductive success of the species as well as factors affecting this pattern in the area. Sure, that with the completion of analysis of questionnaires data, other priorities will be provided.
Build lasting research collaborations between local and international NGOs and academic institutions		During this work, we established a collaboration with Prof. Pavel Munclinger from Charles University in Prague, Czech Republic. We plan to work on the genetic population study of the grey-necked picathartes in Cameroon and this project help us to collect some genetic samples of the species in the area. Also, this project helps us to strengthen our collaboration with the Ebo Forest Research Project with which we successfully monitored the grey-necked picathartes nests in Ebo forest, Littoral Cameroon in 2021.

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

COVID19 was one of our difficulties. But fortunately for us, the lockdown was stopped 2 weeks before the field work. However, it still impacted us as the authorisation of the state to start the work was delayed by 1 month.

At the beginning of this project, there was non-cooperation from most local communities with us, protesting that we were government agents sent to collect information about their land in order to monopolise it later. To limit hesitancy from the communities and to gain their trust, we started with meetings with local chiefs and notables and provided detailed explanation about the work, presenting all our permits (research permit from the Ministry and Wildlife and the research attestation



delivered by my university) attesting that I was a research student. Secondly, with their cooperation another meeting was organised with the local population explaining the objectives of the ongoing project as well as its importance and longterm impact in the area. This fostered collaboration and cooperation. Also, given that my supervisor, Dr Taku Awa II, had worked for many years in some of the areas, he went to the field with us for introduction and his good relationship with the locals also facilitated our entry and eased cooperation with the locals.

During the questionnaire administration activity, there were expectations among community members in terms of economic benefits. Some communities expected the project to provide a reward (mostly monetary) to answer the questionnaire while others expected livelihood options as alternatives to some of the challenges that we encouraged them to cease such as hunting. Fortunately for us, community meetings with chiefs and other community leaders were used as an avenue to clarify such misunderstandings.

In the Nlonako area, guides were requesting more than the budgeted amount for daily payment since most of them are hunters and loggers and for them, the daily outcome of their activities is more than what we proposed. To solve this incident, we had a discussion with the local chiefs in each village with different guides and with the help of local authorities, we came to an agreement but still with a slight increase in the per diem.

1- Population status and distribution of the species in the area has been updated. Picathartes monitors were trained in each village and a student, Yangsi Terrence Kidia, obtained a master's degree using part of the data collected for his thesis.

2- New conservation threats to the species never recorded in the area during the previous work and elsewhere in Cameroon came to light in this project: camp fires (for farmers and hunters), traps set inside the nesting colonies and predation. They will help to further develop strategic conservation awareness programmes in the area for the protection of this restricted range species.

3- It was obvious that local community's attitude and perception had shifted comparing the reticence of the population at the beginning of our work and confidence they had bestowed on us towards the end of the project. This can equally be translated to the community's perception of the species as knowledge gaps were bridged on the species ecology, and appropriate conservation strategies to safeguard the species.

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

Each of the surveyed communities provided one local who was recruited as a field guide/assistant to assist in fieldwork activities and accomplish the study effectively. They received financial support and acquired significant experience in field data collection, and even the basics of grey-necked picathartes nest monitoring skills which will remain useful for further participation in conservation activities in the region. They also participated during questionnaire administration as facilitators



enabling the locals to easily open up to us. In addition, they were very active in helping us to collect scientific data and to educate local people using local and local languages. Also, recognising the influence of traditional institutions on the effectiveness of grassroots conservation education, we closely worked with traditional authorities, community members and focused groups in organising and implementing conservation awareness meetings.

5. Are there any plans to continue this work?

During nest monitoring in Mount Mbam-Mimkom, we found that some nests were abandoned after lining with grass in preparation for egg laying. But the cause of that phenomenon was unknown.

Predation and conspecific aggression in some colonies were observed as well as reuse of some nests in the same breeding season. Considering the above, we are planning to investigate the breeding biology of the grey-necked picathartes as well as factors influencing that pattern in the changing landscape in Cameroon.

We are also planning to build on the achievements recorded during this phase of the project by initiating a long-term conservation education scheme that will involve the local people and traditional institutions as an integral part of conservation activities and decisions in favour of the grey-necked picathartes in the region. There is also a need to provide training and support to the local people on livelihood options as alternative income generating activities.

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

Part of our findings were used by Yangsi Terrence Kidia for his master's thesis which has been successfully defended publicly in January 2021 at the University of Yaoundé I. Also, a paper on perception and attitude towards the grey-necked picathartes is in preparation and will be submitted for publication latest in May 2022. In collaboration with the Ebo Forest Research Project (EFRP), we have finalised this year's monitoring of grey-necked picathartes population in the Ebo forest, Littoral Cameroon. The data will be analysed alongside that of this project for publication in *Ibis* peer reviewed journal. In Addition, the results of this work will form a chapter of my PhD thesis that will be submitted in partial fulfilment of the requirements of a PhD degree in Applied Ecology and Wildlife Management at the University of Dschang. These data will also be used to revise the global conservation status (Global IUCN Red List Status) of this species. The results of this study will be presented next year at a national biological conference: Bioscience.

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

The grant was used during a period of 12 months as planned.



8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in \pounds 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
A pair of Binocular Bushnell 10X50 waterproof.	200	200		Was not initially budgeted but our own got bad during field work and I bought new one for field work. Fortunately for us, the Ebo Forest Research Project provided us tents and three mats. Then, we used money initially budgeted for that to buy the binocular.
Digital Camera (to capture all interesting and significant picture during field work surveys and workshops)	279	290	+11	We saw another which was better than the model originally budgeted for.
GPS Garmin 64s	294	200	-94	We found a good deal
Field guide /Research assistant per diem (x150 days)	1600	1900	+300	In certain locality, we were obligated to increase the per diem of field guides (£16 rather than £ 13.33 budgeted). Also, we spent more time (150 days rather than 120 days than planned) in the field than planned since we seized the opportunity to collect blood sampled of the species for pilot study of our upcoming work on population genetic of the Grey-necked
Transportations, for 10 trips (from Dschang to the project sites)	300	500	+200	The transport cost was skyrocket due to COVID 19 since they were obligated to respect the preventive measures proposed by the government. The extra was also used to pay the transport of our Master student during the field work.



Feeding allowance, for researcher and assistants (x 195 days)	640	815	+175	The initial budget was for two people. But another person was added: Terence Yangsi, our trainee Master student with who we work during all activities of the project.
250 Posters (laminated pictures of threatened birds, awareness message and poster on research results) 350 flyers.	798	350	-448	Fortunately, we saw a better deal with reduction. But it is important to precise that we used different quality than the one planned and the quality was still good (just a slight difference from the one budgeted). This allows us to keep some money to increase the per diem for field guides)
300 Printed t-shirts (used as promotional material)	1080	894	-186	Fortunately, we saw a better deal with reduction, which allow us to keep some money.
Workshops for sensitisation /school lecture)	269	350	+81	We received more attendants than expected.
10 Report preparation (for community, local & National stakeholders, NGO & academic)	200	150	-50	We found a good dear.
Preparation for questionnaire	55	55		
Contingency (5%)	286	293	+7	Costs for communication, library in villages, money transfer for the purchase of some equipment in French.
Total	6000	5997	-3	

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

- Investigate the breeding success of the species as well as factors influencing that pattern in the area.
- Investigate the dispersal pattern of the species in the area.
- Develop modalities for training and supporting local people on livelihood options as an alternative to hunting and shifting agriculture.



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?

Rufford Foundation was acknowledged in the master's thesis of Yangsi Terence as well as verbally in the Power Point presentation (by presenting Rufford Foundation logo) as donor during his defence. Also, the Rufford Foundation logo featured prominently in all conservation posters, t-shirts and flyers that were produced and distributed during our education and awareness campaigns. We also acknowledged The Rufford Foundation as the sole funder of our project during meetings with community leaders and radio programme. Further acknowledgement of the support received from The Rufford Foundation will be made in publications and presentations that will come from this study.

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

Tsetagho Guilain: Applicant and principal investigator.

Dr. Taku Awa II: Supervisor of the work.

Yamsi Terence: Master student and assistant.

Ebo Forest Research Project: Advisor.

12. Any other comments?

I am truly grateful for the financial support offered to us by The Rufford Foundation, which has enabled to update the population status and threats of this threatened species as well as the understanding of the perception and attitude of locals towards the species. Also, this grant enables me to successfully complete a chapter of my PhD thesis. Thank you very much for your assistance.





Grey-necked Picathartes in the nest



Picathartes nestlings found inside the nest in Mount Mbam-minkom





Guilain Tsetagho checking the Grey-necked Picathartes



Snare traps barrier settled in the Grey-necked Picarthes colony





Fire camp established at the Grey-necked Picarthes colony



Picathartes colony used as hunting camps in Mount Nlonako





Feathers and broken egg found in the colony: Evidence of conspecific aggression or predation



Team during training





















Guilain Tsetagho during sensitisation and awareness campaign







Terence Yangsi our Master student during education campaign





Conservation message posted in public places in the villages