

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	SOCK BELL Aristide Junior
<b>Project Title</b>	First assessment and conservation prospects of bats in Ebo Forest, a proposed National Park (Littoral region-Cameroon)
<b>Application ID</b>	29704-1
<b>Date of this Report</b>	11/08/2023

**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
Assessment of Bats' diversity in the Ebo forest massive				The first assessment of bats from Ebo forest massif included a total of 218 bats collected. These belonged to four families, 13 genera and 15 species. The most common bat species seems to be <i>Megaloglossus woermanni</i> .
Record of Bats species having a conservation interest or involved in the zoonoses transmission				We first clarified bat identification combining molecular and morphometric approaches. We found that <i>Glauconycteris curryae</i> qualified as Data Deficient on the IUCN Red List. There is not yet data on its global population trend and distribution. On the other hand, we found in the area, bats listed as natural hosts of several pathogens potentially virulent for humans ( <i>Hypsignathus monstrosus</i> , <i>Epomops franqueti</i> , <i>Myonycteris torquata</i> and <i>Rhinolophus</i> spp.).
Bat's population dynamics				This activity was not entirely carried out monthly as mentioned in the initial objective. We needed first to clarify species identification before, for a better survey population dynamic. This phase has significantly impacted our timetable.
KAP study and Restitution				We covered four villages with awareness programmes involving 79 volunteers. At the end of each fieldwork in these villages, we performed a talk with locals about importance of bats in Ebo forest, as well as prevention against zoonoses transmission by stopping bat consumption and minimising the frequency of intrusion in the Bikombi cave for bats hunting.

**2. Describe the three most important outcomes of your project.**

**a).** A record for the first time of bat species diversity in the Ebo forest, bat conservation status and threats. The site hosts many caves harbouring many taxa of

bats probably threatened by the frequent human intrusion for hunting. These caves need more attention for local conservation.

**b).** The importance of integrative approaches for bats identification. We used morphology and molecular methods for clarifying some identifications mainly for *Hipposideros* spp., *Rhinolophus* spp. as well as vespertilionids. We found *Glauconycteris curryae* a species of conservation importance.

**c).** A greater understanding of local knowledge and their high contribution in the zoonoses emergence as well as to health risks linked to human through their practices involving bats.

### **3. Explain any unforeseen difficulties that arose during the project and how these were tackled.**

We encountered two main difficulties that affected significantly our schedule, the Covid-19 pandemic and bat identifications. During the Covid-19 pandemic, the funds were transferred 10 months after that the project had been approved.

The project was approved in May 2020, and we received funds in February 2021. The bat identification was difficult due to the presence of some bats species complexes such *Hipposideros* spp. and *Rhinolophus* spp. in our samples. We used molecular approach to resolve this gap. This phase took a lot of time by waiting for a two GENBARQUE training sessions organised by Dr Nicolas POLLET from the University of Paris-Saclay.

### **4. Describe the involvement of local communities and how they have benefited from the project.**

In each village, we briefly described the project to locals and tried basically to assess their knowledge about bats. We enrolled in the team around eight residents as field guides and took the opportunity to explain them the morphological description with live bats and their ecological services. Through campaigns, we sensitised chiefs and villagers to avoid killing and eating bat meat and why to protect them. We took time to explain that through hunting and human intrusion in caves, they can lead to the local bat extinction and also to contribute to zoonoses transmission through bat meat consumption.

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

We plan to:

- Cover more areas mainly in the south part of the Ebo forest for inventory.
- Make a genetic database of bats from Ebo and to create a local identification key.
- Study the species composition and distribution around the forest.

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

Regarding our findings, recommendations will be handed to the local administrations for the protection of caves and others bat roosts for the maintenance colonies.

Through reports, data combined including taxonomic diversity of species with conservation importance and local knowledge and practices, will provide more insights for the implementation of a wildlife management policy by local authorities and government for the contribution to classification of the proposed area as a national park.

Findings will be submitted in a peer-reviewed journals embracing all life forms but having as main objective to improve the rational control of biodiversity use by humankind.

Through oral presentations in national or international conferences with scientific committees.

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

I think in the perspectives to apply for another grant to carry out more sampling sessions mainly in the southern part of the forest. Add and update information on the bat species composition and distribution around the forest. Create an association who will promote and encourage the conservation of bats over the area.

**8. 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?**

Yes, I will use Rufford Foundation logo in any part of my project like inside PowerPoint for doctoral seminars and scientific conferences. Relating to the project, the foundation will receive acknowledgements as the major funder in my PhD manuscript, publications or in any publicity.

**9. Provide a full list of all the members of your team and their role in the project.**

**Prof. TINDO Maurice:** Supervisor of the project.

**Prof. Alain Didier MISSOUP:** Co-Supervisor of the project.

**Dr. NICOLAS POLLET:** Trainer for the molecular identification.

**M. TCHOCKANG Pauline Théophile:** Field assistant.

**Mr. LAHO POKAM Willy:** Field assistant

**10. Any other comments?**

We are sincerely grateful The Rufford Foundation for providing funds for this project and for contribution to bat conservation in Cameroon. This fund allows us to assess for the first time the bat diversity from Ebo forest massive and highlight threats towards them through local practices.