

Project Update May 2024

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
<p>Assessing the distribution of katydid species based on GPS coordinate in Mpem & Djim National Park</p>		<p>Partially achieved</p>		<p>Over the last 4 months, katydid species have been collected in two primary zones of Mpem & Djim National Park: the north, which is predominantly savannah, and the south, which is primarily forest. Katydid species are more commonly found in Mpem & Djim National Park's southern region than its northern one. The southern woodland included every species that had been gathered in the northern savannah. These are <i>Macroscirtus kekeunoui</i>, <i>Conocephalus</i> sp., <i>Morsimus</i> sp., <i>Arantia</i> sp., <i>Zeuneria melanopeza</i>, <i>Hexacentrus</i> sp., <i>Meconema</i> sp., <i>Apterocirtus</i> sp., and <i>Lichenochrus congicus</i>. However, <i>Morsimus</i> sp. and <i>Arantia</i> sp. were exclusively found in the forest south of Mpem & Djim National Park.</p>

<p>Assessing the Bioecology of katydid base on species richness, bundance and habitat characteristics in Mpem & Djim National Park</p>		<p>Partially achieved</p>	<p>In Mpem & Djim National Park, nine species were gathered in the last 4 months, from January to May 2024. These include <i>Macroscirtus kekeunoui</i>, <i>Conocephalus sp.</i>, <i>Morsimus sp.</i>, <i>Arantia sp.</i>, <i>Zeuneria melanopeza</i>, <i>Hexacentrus sp.</i>, <i>Meconema sp.</i>, <i>Apterocirtus sp.</i>, and <i>Lichenochrus congicus</i>. <i>Apterocirtus</i> was the species with the highest abundance, while <i>Lichenochrus congicus</i> had the lowest.</p>
<p>Assessing the threats of katydid</p>		<p>Partially achieved</p>	<p>From January to May 2024, a number of threats to katydids were noted. Some of these include bush fires in dry season, particularly in the park's northern region, when shepherds purposefully start fire to encourage the growth of young shoots for their herd of oxen. In addition, there were other activities noted that had a negative effect on the population of katydids, such as the extension of maize farms as well as cocoa plantations. Degradation of the katydid habitats in our two prospective areas may result from the expansion of corn fields and cocoa plantations.</p>

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

a). According to the number of GPS coordinate points recorded, katydid species have a greater spatial distribution in the southern part of Mpem & Djim National Park, which is relatively more forested, compared to the northern savannah vegetation.

b). During 4 months of sampling, our data show that nine species of katydid more or less abundant has been found in Mpem & Djim National Park, namely *Macroscirtus kekeunoui*, *Conocephalus* sp., *Morsimus* sp., *Arantia* sp., *Zeuneria melanopeza*, *Hexacentrus* sp., *Meconema* sp., *Apterocirtus* sp., and *Lichenochrus congicus*. Among these species, *Apterocirtus* was the most abundant species with about 39 individuals and *Lichenochrus congicus* the least abundant with about three individuals.

c). The assessment of katydid threats shows that bush fires in the dry season, harvesting of tree products, the use of wood, the extension of maize farms, as well as cocoa plantations, were the main threats recorded that contributed to the degradation of katydid habitats and had a detrimental impact on the katydid species.

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

During our work, the major difficulty was using Ecogards as planned in our methodology. According to the new administration rule, the Ecogards must walk in pairs to carry out any mission in the park. Indeed, in our initial methodology, we were supposed to use two teams in the field with two Ecogards each at the same time. To tackle this issue, we were obliged to spend 1 day in the south and 1 day in the north in separate time with two Ecogards.

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

The local communities involved in this study have been able to increase their research capacity. To enable their future integration as professional ecotourist guides, we trained local populations to identify species of katydid and use navigational aids such as a compass and GPS. This serves as an introduction to community participation in the management of their natural resources. They were paid for their services as porters and guides, which assisted them in paying for some of their costs. We talked to them about the value of protecting katydids from various human-anthropogenic activities and the need to conserve them.

5. Are there any plans to continue this work?

Other research avenues have been brought to light by this study, which could benefit not just this park but also other protected regions and neighbouring parks. Throughout our research, we discovered that a large number of katydids make noises that are somewhat audible both during the day and at night. Finding further funding to pursue

our studies on the acoustic diversity of katydid species and their conservation in Cameroon will be an exciting endeavour.

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

Several publications that will be published in peer-reviewed journals are currently being prepared such as check list of katydid species in Mpem & Djim National Park. In order to present my study findings, I will also submit applications to attend national and worldwide conferences.

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

- We will combine different methods to gather more information on the katydid diversity in Mpem & Djim National Park, such as song recording and DNA analysis.
- In order to make sure that villagers, legislators, and forestry and non-forestry personnel understand the significance of safeguarding these species and encourage altering behaviour throughout the community, we will arrange awareness and education campaigns and continue the educational plan.
- Our research findings should be published in peer-reviewed journals and made available to Cameroonian stakeholders, including the local government agencies responsible for managing wildlife.
- Maintaining communication and disclosure of the acquired results at various scientific conferences

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 have used the logo of The Rufford Foundation during the training of our team concerned with this project.

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

Dr. SIMEU NOUTCHOM Alain, the project leader and principal investigator, designed the survey, collected and analysed the data, and wrote the report.

Mme. GLWADYS ZANG AFFA'A, PhD Candidate, University of Yaoundé I (Research assistant). Assist the principal investigator in implementing the project protocol, in the field and assisting in katydid species sampling.

Mr. CHIMBIEN Jean Chretien, Mr. TCHANA NYA Brice Stéphane, Eco guards, representative of the Ministry of Forestry and Wildlife; Protect the team from dangerous animals during the fieldwork.

Mrs. Ndjouh Berenge, MOSSI Eric, KOUNGOU Romual and NYANDI AWA (porters), Carry the field materials, including scientific equipment, camping material, and food for all the team members.

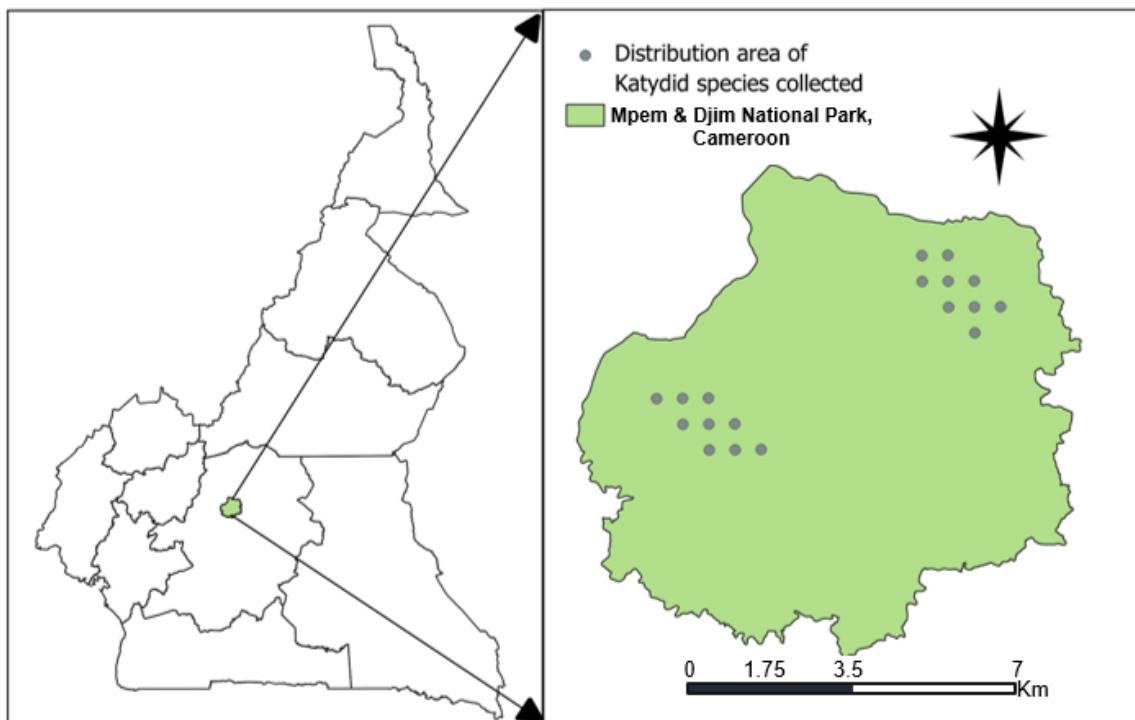
10. Any other comments?

We thank the Rufford Foundation for financial support of this research through the Rufford Small Grant. We greatly thank Pr. Klaus-Gerhard Heller, our referee, and Pr. Sévilor Kekeunou, supervisor, for their support. We also thank the members of the field team, HERP Cameroon's Director for their cooperation and the entire population of the Mpem & Djim village.

Appendices

All photos of this report should be credited as follows: **SIMEU NOUTCHOM A.- Rufford Foundation/ University of Yaoundé 1**

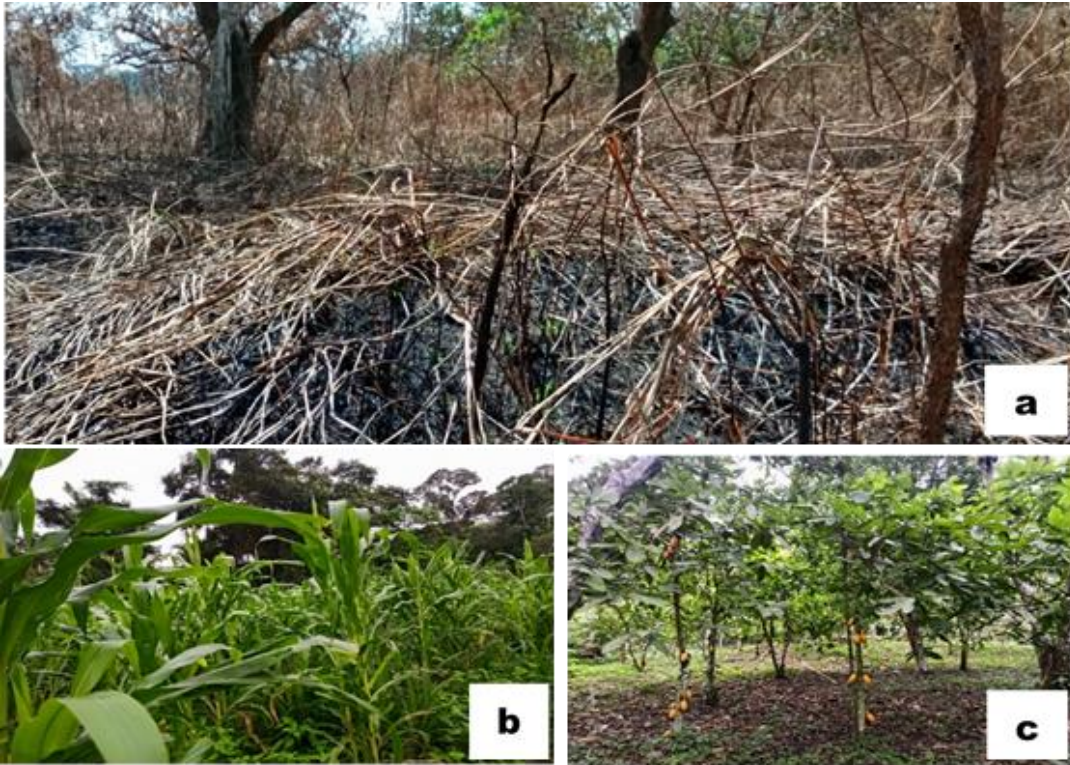
Appendix 1. Distribution area of katydid species in Mpem & Djim National Park, during the past four months



Appendix 2. Some Katydid species collected in Mpem & Djim National Park, during the past four months: a) *Macroscirtus kekeunoui*, b) *Zeuneria melanopeza*, c) *Apterocirtus* sp., d) *Hexacentrus* sp., e) *Lichenochrus congicus*, f) *Arantia* sp.



Appendix 3. Different anthropogenic practices threatening katydid species in Mpem & Djim National: (a) bush fires, (b) maize farms (c) cocoa farms plantation



Appendix 4. Team members

