

Final Evaluation Report

Your Details	
Full Name	Ruth Areli Gómez Rodríguez
Project Title	Building local capacities in conservation of canopy's mammals and its interactions: A first stage of a long-term monitoring at the Yucatan Peninsula, Mexico.
Application ID	36618-1
Date of this Report	30 August 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
Capacity building for local inhabitants.				<p>We started the project in the ejido El Cafetal, in the town of Limones. We presented the project to the local inhabitants and invited them to join us. We received a good response as many were interested and joined to our work team. We trained them for the activities that were going to be carried out and now they are capable of monitoring the small and medium-sized mammals of the canopy. Besides, we had a meeting with elementary school boys. In this meeting, we showed pictures of mammals diversity living in their neighbourhood.</p> <p>All the experiences acquired by Limones inhabitants also has been used to stablish the grassroots on the necessity to make an ecological ordering of the ejido, mainly now that the tren maya will pass through the ejido.</p>
Monitoring of medium-sized mammals: two species of primates, spider monkey (<i>Ateles geoffroyi</i>) and howler monkey (<i>Alouatta pigra</i>), and the one carnivore species known as kinkajou (<i>Potos flavus</i>).				<p>To achieve this objective, we walked approximately 2 km in each of the established sites. We found groups of <i>Ateles geoffroyi</i> with an average of 28 individuals. We observed that it prefers trees of the <i>Brosimum alicastrum</i> and <i>Manilkara zapota</i> species, they feed on their fruits, they also like to rest on trees with bromeliads, since they look for the water that accumulates in them. Unfortunately, we could not observe any organisms of <i>Alouatta pigra</i> or the species <i>Potos flavus</i>. We don't find them on our hikes or in the camera traps we set up. These both species are quite sensitive to human presence, thus it reserves more detailed research.</p>
Monitoring of arboreal rodents. species				<p>Until now, we have collected 51 small mammals of seven different species (<i>Heteromys gaumeri</i>, <i>Marmosa mexicana</i>,</p>

			<p><i>Oryzomys couesi</i>, <i>Otodylomys phyllotis</i>, <i>Peromyscus leucopus</i>, <i>Peromyscus yucatanicus</i>, and <i>Reithrodontomys spectabilis</i>). Being the most abundant <i>O. phyllotis</i>. According to the data obtained, there is a difference in species between the conserved and disturbed sites. In conserved sites there were more rodent diversity in the canopies. They function in ecosystems are underestimated, and my work highlighting their sensitivity to be affected by human activities.</p> <p>We detect that the next step would be to analyse the genetic diversity to evaluate the magnitude of the effect.</p>
Analyse of the association between arboreal rodents and their arthropod ectoparasites.			<p>In the seven small mammal species, we have found 357 ectoparasites of which five families have been identified; Ixodidae, Listrophoridae, Laelapidae, Trombiculidae and Pulicidae.</p>
Implementation of natural canopy bridges in logged forests.			<p>In the places where we observed spider monkeys, we placed 20 m- long ropes between trees that are separated by paths where wood was extracted, to create bridges that serve the monkeys to continue moving in their habitat. We have also put camera traps in the same places, to see if the monkeys are actually using the bridges.</p>
Give talks in schools about the importance of canopy's tropical mammals.			<p>We give talks at the ejido primary school in each of the groups. Likewise, images and videos that have resulted from the project were presented to both children and adults of the ejido so that they are aware of the biodiversity that surrounds them and are interested in its conservation.</p>

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

a). The results of this project are providing important information about canopy mammals and their interactions. As well as the impact that anthropogenic activities have on them. This is important since the information available on this subject is scarce.

b). The foundations have been laid for long-term monitoring of small and medium-sized canopy mammals, including local inhabitants, who can now use camera traps, Sherman traps, and monitor monkeys through direct observation.

c). The local inhabitants of the ejido have been made aware of the species found throughout this year in the places near their town, which has aroused curiosity, from children to adults, to learn more about the fauna and not only to know it but also to conserve it. Hoping more people join our team.

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

- 1) The main problem at the beginning was that in the sites we established for our sampling we did not find the species we were looking for. This was for small and medium mammals. To solve it, we decided to change the sites further into the jungle and put water troughs so that the mammals would come looking for this resource.
- 2) Another problem is still the difficult access to the canopy, we were able to solve it by using ladders to gain access, but more protective equipment is needed.
- 3) Constantly traveling from Mexico City to Quintana Roo implies more expenses for tickets and lodging, so I decided to move to Quintana Roo to save on those expenses and at the same time be closer to the people of the ejido.

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

From the beginning, the inhabitants of the ejido showed interest in the project and got involved to guide me in exploring the probable sites to install the traps. They made the bases that were placed on the canopy to hold the Sherman traps. They learned to use Sherman traps. They learned to place the camera traps and to mark the sites on the GPS.

The approach they have had with the jungle, with the canopy and with the fauna that we have been fortunate to find, has led them to seek ways to better coexist with the species. The result of this is the interest that they have shown in starting a UMA. The UMAs are properties owned by owners or possessors who voluntarily use them for the sustainable use of the wild species that live there. They also respond to the need to conserve biodiversity and boost production and socioeconomic development. In this way they will be able to take advantage of the tepezcuintles (*Cuniculus paca*) in a sustainable way and will have an economic contribution since it is a species that is widely commercialised as food in the region.

5. Are there any plans to continue this work?

Yes, although we have fulfilled the activities that we had planned for the 1st year, the project is still ongoing.

Thanks to the fact that many local people have collaborated with our project, the plans go ahead with the monitoring of canopy mammals.

We plan to take talks to higher level schools and to other towns in the ejido, such as Chacchoben, Andres Quintana Roo and Reforma.

The SiPECAM project also continues, and we continue to collaborate with CONABIO, monitoring mammals and birds with camera traps.

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

We plan to continue giving talks in the ejido and continue with the "Casa del Árbol" project that allows us to go with people into the jungle, not only residents of El Cafetal but also neighbouring ejidos.

Once we finish the sampling and have the data analysed, they will be part of my doctoral thesis. Which I hope will be published in 2025. Likewise, I will share these results in a scientific article in a magazine such as Biotropica.

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

The first important step that follows is to identify the species of ectoparasites of small mammals to make a more accurate analysis of the association between them and how this relationship is affected by anthropogenic activity.

Another important step is to continue involving people to be part of our project and that they too can give talks about the importance of the canopy and the interactions that occur in it.

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?

The Rufford Foundation logo was used in every presentation that has been given on the common and in the schools.

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

Ruth Areli Gómez Rodríguez. Leader of the project. Development of the project, field work and data analysis.

Gabriel Gutiérrez Grandos. Collaborator in the development of the project, field work and data analysis.

Luis Guzman Delfin. Field guide. Assistant in setting Sherman traps and camera traps.

Jorge Vidal Quijada Tuyub. Field guide. Assistant in setting Sherman traps and camera traps. He also helped put up the bridges for the spider monkeys.

Jeffe Azariel Quijada Ramírez. Field guide. Assistant in setting Sherman traps and camera traps.

Elmer de Jesús Nacté Salazar. Carpenter. He is in charge of manufacturing the wooden structures to support the Sherman traps.

Marcos Canté. Xyaat Contributor. He helped us by lending us the place to give some talks. Assistant in giving talks about the history and culture of the place.

10. Any other comments?

The entire team appreciates the support provided by The Rufford Foundation, which has made it possible to carry out this project.



Luis Guzmán preparing the place to install a camera trap.



Jorge Quijada placing bridges for the spider monkeys.



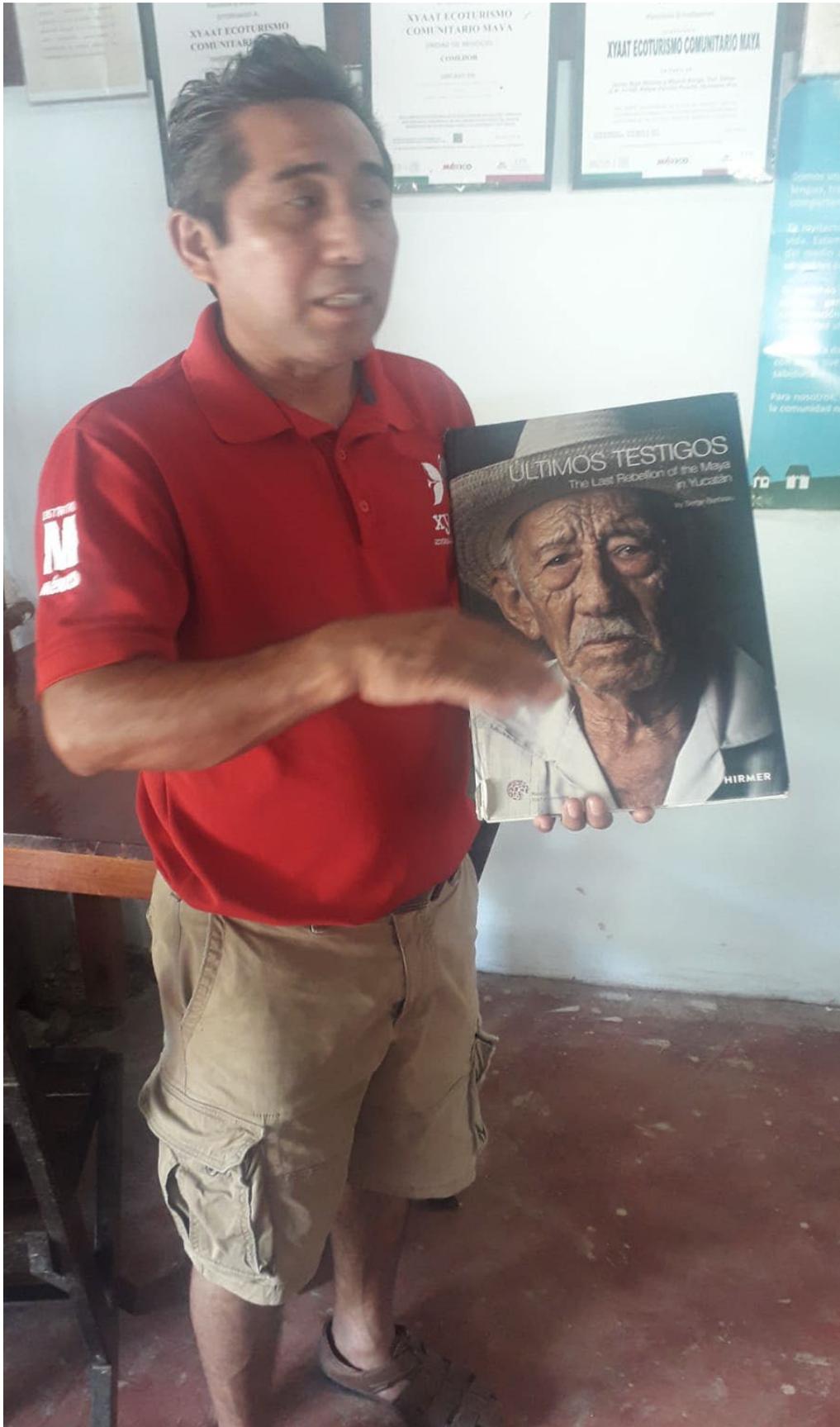
Ruth Gómez at the end of a talk about the importance of fauna at the Limones school.



School group after a talk about canopy animals in the Sian ka'an Biosphere Reserve.



School group before a talk about canopy animals in the Sian ka'an Biosphere Reserve.



Marcos Canté sharing with us about the history and culture of the ejido of Señor.