

## The Rufford Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to [jane@rufford.org](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	José Fernando Moreira Ramírez
<b>Project title</b>	Conservation of an endangered social species: the white-lipped peccary ( <i>Tayassu pecari</i> ) in a community forestry concession in the Maya Biosphere Reserve
<b>RSG reference</b>	23352-2
<b>Reporting period</b>	January 2018, January 2019
<b>Amount of grant</b>	£5,000
<b>Your email address</b>	jfmoreira@ecosur.edu.mx
<b>Date of this report</b>	February 9, 2019

1. Please 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
Relative abundance of white-lipped peccary using a non-invasive method				Relative abundance for areas with and without forest management was similar. By means of camera traps installed in aguadas, it was determined that the presence of offspring for WLP occurs mainly in the dry season, in areas with and without forest management. The groups are composed mainly of adults, with sizes between 18 and 24 individuals.
Estimate food availability				We found ripe fruit of eight plant species along the transects within the study site, and availability of these food items not varied between areas with and without forest management. Four species ( <i>Brosimum alicastrum</i> , <i>Cryosophila argentea</i> , <i>Manilkara zapota</i> , <i>M. chicle</i> and <i>Ampelocera hottlei</i> ) accounted for the majority (80%) of the fruits on the forest floor. These results are similar to those found in other areas of the Maya Biosphere Reserve. Something important to mention, is that in this area of the MBR, the <i>Manilkara chicle</i> fruit species gives food to different ungulates, during the dry and rainy season.
Environmental education program				We managed to implement the environmental education programme in the village of El Caoba. This village is located within the Arbol Verde Forest concession. The village is composed of mestizo people. With field technical personnel, together with teachers, information was presented and transmitted about the importance of WLP in the forest, as well as other vertebrate species that inhabit the community forest concession.

**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

At the beginning it was difficult to enter the sampling sites, since there was no adequate vehicle. We solve this problem, using a motorcycle. After this, we managed to have a vehicle of the Communitarian Concession, which facilitated the entry of equipment, food and personnel.

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

We obtained the support of the Board of Directors of Arbol Verde, to do the study in their community concession. Large vertebrates such as the white-lipped peccary present medium and large groups in sites with timber extraction. The level of extraction of wood is relatively low, which allows that there is no high human impact in the area. The information obtained has allowed identifying sites frequented by large mammals, including jaguars, tapirs. These sites will be used to implement ecotourism. This will help generate additional income.

The information obtained in Arbol Verde will help to have a broader view of the state of conservation of the WLP in the MBR and Guatemala. This year, the Red List of Endangered Species for Guatemala will be updated. This technical information will be used to carry out the evaluation of WLP, with which we will request that the species be re-categorised as Endangered. This will allow the species not to be hunted, especially for sport. Creating a focus on conservation, management, favoring low impact ecotourism. In Arbol Verde, we have advanced to have facilities to receive tourists, and take them to bodies of water to observe wildlife. The information will be presented to the Directorate of Forest and Wildlife Management of the National Council of Protected Areas. We have had previous approaches, and we hope that this information will be used to support the WLP in Guatemala.

In addition, we have collaborated with Mesoamerica researchers to promote the conservation of the WLP. The situation of this species is alarming, with worrying declines throughout the region.

I add this link with the information on the state of conservation of the WLP in Mesoamerica.

<http://www.chmguatemala.gob.gt/theme/especies-amenazadas/217-rapido-declive-de-la-poblacion-de-pecari-de-labios-blancos-en-mesoamerica>

**4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).**

The project focused on the conservation of white-lipped peccaries and other vertebrates, with the collaboration of civil society Arbol Verde, through the Board of Directors. We had a great relationship with the Vice President of the Community Concession, Mr Fredy Solis. The research helped to know the important sites with presence of species of interest for tourism, tapirs, jaguars and WLP. In addition, we

evaluate the situation of the WLP in areas with and without logging. The results show that the relative abundances and group sizes are similar in the two areas. The Civil Society Arbol Verde maintains an adequate management of the forest, where ecotourism can be an alternative to raise economic resources.

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

Yes. My future plan is to continue working for the conservation of white-lipped peccary and preserving its natural habitat. This species is highly threatened in Guatemala and throughout the region of Mesoamerica. A goal is to change the status of conservation of the species with the IUCN to Mesoamerica. I am also interested in learning more aspects about the ecology movements of the species within the Selva Maya. For achieving this, I worked together with the support of the Park Service of Guatemala, national and international non-governmental organisations. Working together with civil society, for example the Arbol Verde Community Forest Concession. We have collaborated greatly to know and photograph charismatic species for ecotourism, developing an illustrated guide of vertebrates for this community concession. This will help promote knowledge of vertebrate diversity, to attract domestic and foreign tourists.

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

In January 2019, I participated in the Researchers Meeting promoted by the Rufford Foundation in Guatemala City. The event was attended by young researchers, university professors from Guatemala, and conservationists from Mexico, Costa Rica, Colombia and Nicaragua. To disseminate information to the Park Service (Consejo Nacional de Áreas Protegidas), I have made oral presentations and technical report. In addition I made presentations at various international conferences on conservation of endangered species.

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

The grant was used in the stipulated time of 1 year. The activities were developed based on the timeline.

**8. Budget: Please 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.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
Per diems for 1 persons (£ 3.5 per day per 10 days)	350	370	+20	On some occasions I used some of this money for vehicle

per month per 10 months)				maintenance. That was due because the roads to enter the Community Concession are in poor condition.
AA batteries for 14 camera traps, each camera use 8 batteries, change batteries 4 times (£1.00 each battery AA) 448 batteries, £448.00	448	448		Sometimes we use part of the money to buy fuel for the vehicle, and oil for the chainsaw.
Salary & fringe benefits for 1 field technician (£336.00/month/8 months)	2,688	2,688		This resource was used to hire a young field technician with a lot of enthusiasm. Melvin Garcia is a great person, passionate about the conservation of wildlife. Melvin and Francisco participated with me in the presentations for children in the village of El Caoba.
20 SanDisk® SDHC™ Memory Cards £11 each SD	220	200	-20	
10 Bushnell® Trophy Cam™ HD Aggressor Trail Camera with Hyper Night Vision LEDs £122 each camera	1,220	1,220		
<b>Total</b>	<b>5000</b>	<b>5000</b>		

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

The Board of Directors has prohibited the hunting of ungulates in Arbol Verde Community Concession. However, there is the threat of incursions by other people who are not members of the community concession. An important step will be to contribute in the organisation of the stored resources to carry out patrols, implementing the adequate software to systematize the information. For example, the use of SMART, to train park rangers in the community.

This year the Red List of Endangered Species of Guatemala will be updated. We will promote the re-categorisation of the species, based on the scientific information we have obtained. Progress has been made at the regional level in Mesoamerica so that the white-lipped peccary is classified as Endangered according to the requirements of IUCN.

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

Yes, I use the logo of The Rufford Foundation during my oral presentations and the RF received publicity during my conservation project. For example, during the work done with teachers and students in the village El Caoba. As part of the progress, oral presentations were made at the Árbol Verde board meetings. In January, the GSR Conference was held in Guatemala. On this occasion I presented my project and initiative related to the management and conservation of the white-lipped peccary in the Selva Maya. The conference was attended by students and researchers from different institutions.

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

**Francisco Cordova:** Field technician, he carried out field work, being trained in the installation of camera traps. Francisco is a member of the Arbol Verde civil society.

**Melvin García:** Field technician, who supported the activities of the project. Melvin is a young enthusiast, being trained to use the mammal monitoring equipment in the Arbol Verde community concession.

**12. Any other comments?**

Thanks to support from the Rufford Foundation I managed to develop my research project in the Selva Maya. The project has been encouraging to contribute to the conservation of white-lipped peccary and preserving its natural habitat in the Arbol Verde Forest Concession. This has enabled the government institutions and civil society to pay attention to the conservation of this species. Furthermore elementary students from local schools have known more about the ecology and biology of this species. This year we will promote before the National Council of Protected Areas, based on the scientific information generated, the importance of changing the category of WLP in the Red List of Endangered Species of Guatemala. The support will be made in conjunction with different civil society organizations.



Presentation at RSG Guatemala Conference.



Presentation at El Caoba School.



Aguada Concession Community, Arbol Verde.