

The Rufford Foundation Final Report

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	José Fernando Moreira Ramírez
Project title	Conservation of an endangered social species: the white-lipped peccary (<i>Tayassu pecari</i>) in the Selva Maya.
RSG reference	18131-1
Reporting period	September 2015-September 2016
Amount of grant	£4961
Your email address	jfmoreira@ecosur.edu.mx
Date of this report	September 26, 2016

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
Estimate home range and habitat use during the dry and rainy seasons			X	We encountered problems with VECTRONIC collars, which failed to connect with the satellite and send the locations, especially in the rainy season. This year we had used two Telonics collars and I obtained better transmissions of locations to the satellite. In the first months of this year, cold fronts weather posed difficulties to carry out capture attempts in the MBR. However, we captured two animals in late May and early June 2016. In the CBR, the lack of rain caused that peccaries shifted outside the protected area in search of water. However I will continue capturing peccaries in July 2016 in the MBR and CBR to increase the sample size and have one more group in each study area.
Estimate group size			X	The minimum group size was estimated using sequences of photographs taken with camera traps. The estimated average group size was 17 (\pm 9.5) and 25.5 (\pm 12.6) individuals. In addition to camera traps, we used direct observations of radio-collared peccaries in order to estimate group sizes
Estimate food availability		X		The transects in MBR were visited from September 2015 to May 2016. In October and December 2015 we

				<p>did not visit the transects. In total for the MBR we have walked 116 km. At CBR We did not walk over the transects (January-May), but in July 2016 we will began registering data. We found ripe fruit of 14 plant species along the transects within the study site, and availability of these food items not varied seasonally. Four species (<i>Brosimum alicastrum</i>, <i>Cryosophila argentea</i>, <i>Manilkara zapota</i>, and <i>Ampelocera hottlei</i>) accounted for the majority (84.5%) of the fruits on the forest floor.</p>
Implement environmental education program			X	<p>We managed to implement the environmental education programme in the village of Paso Caballos. This village is located within the Laguna del Tigre National Park. The village of Paso Caballos is composed of people of ethnic group quekchi.</p>

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

During the project it was difficult to capture peccaries. During the summer there was a lot of surface water in different water bodies. Despite this we managed to capture three individuals at the end of the dry season. We managed to capture three individuals. Something that I did not consider was the predation exerted by big cats. Three individuals captured this year, one was predated by a big cat. For this we obtained information from this individual for only two months. The important thing was that we still had individuals with radio collars in this group.

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

We estimate the home ranges of peccaries in the Maya Biosphere Reserve for the first time. This information is very important to know the habitat requirements for the species. This information will be presented to the Park Service to propose sites for patrols within the Reserve.

We estimate the minimum group sizes of peccaries. This data is very important to know the status of conservation of this population in the Maya Biosphere Reserve. The groups are relatively higher than those reported in other parts of Mesoamerica, for example Chimalapas and Sian Kan in Mexico.

We initiated an environmental education programme in the village of Paso Caballos with the aid of Teacher Mayrena Morales. This programme has allowed students to know the importance of peccaries in tropical forests.

The initiative of the Peccary Conservation Program in the Selva Maya has allowed the authorities become aware of the serious threats affecting this species in Guatemala. And working with government organisations and NGOs We have taken positive steps to change the status of conservation of this species in Guatemala.

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

We initiated an environmental education programme in the village of Paso Caballos with the aid of teacher Mayrena Morales. Mayrena is an enterprising person working for more than 8 years on environmental education programmes within the Maya Biosphere Reserve. To date, Mayrena works with children 10 to 11 years old. The focus of the environmental education programme is on the conservation of white-lipped peccaries, and tropical forest. We contributed with data from my PhD project to the environmental education programme by using photographs of camera traps and videos taken in the field to show children the importance of peccaries as architects of tropical forests. The education programme is still offered once a week. Field assistants collaborating in my project include Celso Umaña (Mestizo ethnic group) and Antonio Xol (Quekchí ethnic group). Celso and Antonio were trained to check camera traps, to record fruit abundance in transects, and to use radio telemetry equipment and techniques to locate groups of peccaries in the forest. They contributed enormously to my project searching for waterholes visited often by peccaries and thus capture attempts were better. On some occasions, field assistants collaborated on the environmental education programme in Paso Caballos, Maya Biosphere Reserve. They have spoken about their experience working on the conservation of peccaries and shared their knowledge to the children.

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.

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

For academic outreach I write my PhD thesis. I also write two papers to disseminate some aspects of the ecology of white-lipped peccary in the Selva Maya. To disseminate information to the Park Service (Consejo Nacional de Áreas Protegidas), I have made oral presentations at roundtable discussions. In addition I made presentations at various international conferences on conservation of endangered species. In October 2015 in Guatemala City, in August 2016 in Belize City and Quito, Ecuador. Besides I write some press notes in local newspapers to communicate the results obtained with the Peccary Conservation Program.

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 one 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.

Rate of exchange £1.00= USD\$1.56 £1.00=Q11.93 (Quetzales, Guatemala)

Item	Budgeted Amount	Actual Amount	Difference	Comments
1 radio collars Model TGW 4570-3 Iridium, Tag with CR-2A release, £1,859.00 each one, 1 Telemetry receiver £430.00, (Dan-Inject)	2289.00	2289.00	---	Instead of buying the TDC-Iridium software, cable TSC-7A and adapter (Telonics), I bought a Dan Inject receiver.
Per diems for 2 person 1(£ 3.5 per day per 8 days per month per 12 months)	1260.00	672.00	---	On some occasions I used some of this money for vehicle maintenance. That was due because the roads to enter the National

				Park are in poor condition.
Vehicle Maintenance		588.00		Money used for vehicle maintenance to enter the Laguna del Tigre National Park. Selva Maya.
4 camera traps Reconyx HC 600 Hyperfire (£353.00 per camera trap) used to estimate the group sizes.	1412.00	1412.00	---	
Total		4961.00		

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

One step is to estimate the number of hunted peccaries (subsistence hunting) in villages that are within the Maya Biosphere Reserve. This parameter is important to learn the hunting patterns of people and to estimate the impact of this hunt. This information is necessary to assess whether the species is being over hunted or not. It is also important to determine closed seasons. This work must be developed in conjunction with communities and with the Park Service of Guatemala.

It is important to know the density and movement patterns of peccaries in areas with forest management to determine the impact of this activity in the Selva Maya.

I consider that the conservation status of white-lipped peccary in Mesoamerica should be modified based on current information on the ecology of the species. Based on the criteria of the IUCN, the species should be listed as Endangered. This change should be performed with the help of other institutions working in the countries of Central America and southern Mexico.

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

Yes, I use the logo of The Rufford Foundation during my oral presentations and the RSGF received publicity during my conservation project. I made presentations at international conferences on biodiversity conservation, in schools and government people working in the conservation of biodiversity. I also included the name of the foundation in scientific papers and press releases as tokens of appreciation for their support.

11. 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 Selva Maya. This has enabled the government institutions pay more attention to the conservation of this species. Furthermore elementary students from local schools have known more about the ecology and biology of this species.





Foto Prensa Libre: ÁNGEL JULAJUJ

SEMBRADÍOS DE plantas medicinales de El milagro de las plantas, en Sololá, que sirve de alternativa ante las carencias del sistema de Salud.

USAN PLANTAS MEDICINALES

Recurren a métodos naturales

Vecinos buscan opciones debido a las carencias en sistema de salud.

POR ÁNGEL JULAJUJ
PROVINCIA

Debido a las carencias en el sistema de Salud, pobladores de Sololá y Chimaltenango han optado por buscar opciones para aliviar las enfermedades que los aquejan, como el uso de plantas medicinales.

Las bondades de la medicina natural son promovidas por el colectivo Red Nacional por la Defensa de la Soberanía Alimentaria en Guatemala (Redsag), que pretende rescatar las prácticas ancestrales en el tratamiento de enfermedades.

En la cabecera de Sololá, a pesar de la falta de reconocimiento de las autoridades de Salud, en la comunidad Xilbalbay funciona la organización de productos medicinales naturales El milagro de las plantas, que promueve 35 tipos de medicamentos.

Ese lugar cuenta con su propia parcela para la producción de plantas medicinales, así como un laboratorio para la formulación y el procesamiento de los productos utilizados por naturópatas en el tratamiento de



Foto Prensa Libre: CORTESIA

MARTA BULUX, en su parcela, en Tecpán Guatemala, donde cultiva plantas medicinales.

varias enfermedades.

Antonio González, integrante de Redsag, refirió que es necesario recuperar la experiencia de los antepasados en la producción de plantas medicinales, y que se deben aprovechar los recursos naturales.

María Miquique, naturópata, refirió que trabaja con 96 tipos de plantas.

INICIATIVA

En el barrio La Giraldita, Tecpán Guatemala, Chimaltenango, Marta Bulux, de 20 años, ayuda a sus vecinos con la donación de plantas

medicinales, las cuales cultiva debido a la falta de medicamentos en centros asistenciales nacionales.

Bulux afirmó que en ese barrio la mayoría de los habitantes perdieron sus pertenencias con el paso de la tormenta Stan, en el 2005, lo que agravó la situación de pobreza.

Agregó que cultiva unas 50 especies de plantas como albahaca, ruda, maría Luisa, romero, apasote y diente de león, que se utilizan para malestares estomacales, cólicos, gripes y mal de ojo.

96
PLANTAS
medicinales
son cultivadas
en Sololá.

ESTUDIANTES PROTEGEN ESPECIE

Expertos promueven conservación del pecarí

POR LA REDACCIÓN
PETÉN

Estudiantes de cuarto primaria de la escuela oficial de Paso Caballos, San Andrés, Petén, forma parte de un programa de conservación del pecarí de labios blancos, una especie amenazada por la destrucción de su hábitat.

Paso Caballos se ubica en el Parque Nacional Laguna del Tigre, donde la presencia de esos mamíferos es considerable, por lo que expertos esperan concienciar a los niños sobre la importancia ecológica que tienen los pecaríes en las selvas tropicales.

El pecarí de labios blancos es una especie social, que en Petén se ha visto en grupos de entre 10 y 60 ejemplares.

El biólogo José Moreira Ramírez, estudiante de doctorado del Colegio de la Frontera Sur Unidad Campeche, México, señaló que



Foto Prensa Libre: CORTESIA

ESTUDIANTE DE la escuela de Paso Caballos, San Andrés, dibuja un pecarí.

19
NIÑOS
participan en
programa de
conservación.

la iniciativa es parte del Programa para la Conservación de los Pecaríes en Guatemala, que cuenta con el apoyo del Consejo Nacional de Áreas Protegidas, Wildlife Conservation Society, The Rufford Foundation, American

Society of Mammalogists, Estación Biológica Las Guacamayas e Idea Wild. Añadió que el proyecto se implementa desde febrero último y que gracias al apoyo de la maestra Mayrena Morales Puga ha dado resultados positivos.

LOS RESPUESTOS PARA MI AUTO

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