

## The Rufford Small Grants Foundation

### Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants 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**

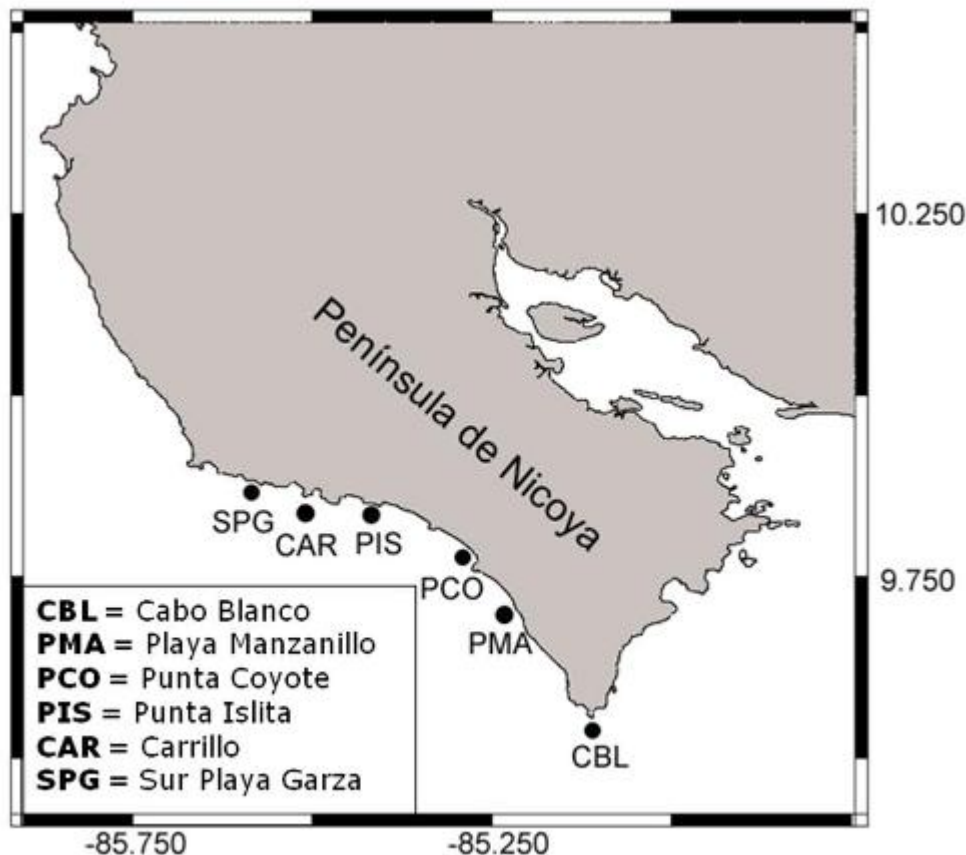
Grant Recipient Details	
<b>Your name</b>	Javier Alejandro Carrión Cortez
<b>Project title</b>	Home Range as a Tool for Conservation Efforts of Sea Turtles in Critical Foraging Grounds
<b>RSG reference</b>	06.07.09
<b>Reporting period</b>	November 2009 – November 2010
<b>Amount of grant</b>	£6000
<b>Your email address</b>	<a href="mailto:tavaruava@hotmail.com">tavaruava@hotmail.com</a> , <a href="mailto:jcarrion@uabcs.mx">jcarrion@uabcs.mx</a>
<b>Date of this report</b>	February 2010

**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
To determine the hawksbill's ( <i>Eretmochelys imbricata</i> ) home range at Punta Coyote, Costa Rica			X	
To determine and quantify the diet of hawksbills			X	
To determine the relationship between the hawksbill's home range use pattern and the spatial distribution of food resources			X	
Local community integration and environmental education			X	
To provide key information as a tool to propose the protection of Punta Coyote under the Costa Rican National Wildlife Refuge scheme		X		The proposal to extend the Caletas-Arío Wildlife Refuge northward to its current extension is being elaborated by the Sea Turtle Restoration Program (PRETOMA). Other studies with other species (e.g. sponges, fishes) are also being applied to support the establishment of the management scheme.

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

It was not possible to carry out the black turtle (*Chelonia mydas*) home range study at Bahia Magdalena (Mexico) because when I finished the project at Punta Coyote (Costa Rica) I realized that the remaining funds were not enough to accomplish all the objectives at Bahia Magdalena. However, the remaining funds were used to explore other potential areas where hawksbill turtles are aggregating along the Nicoya Peninsula. In the next map I present the main areas where we found the presence of hawksbill turtles along the Nicoya Peninsula.



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

**a.** We demonstrated that Punta Coyote is a developmental and feeding ground for different sized (curve carapace length range = 38 – 76 cm) hawksbill turtles. This population shows high site fidelity to the rocky reef where they feed mainly on sponges and tunicates. We also found that hawksbill home range inner structure consists of areas used with different intensity, which is directly related to the differential food abundance in the site.

**b.** We determined that hawksbill's home range at Punta Coyote vary from 11 – 126 ha. This information provides a spatial approximation of the minimum area that need to be managed to protect hawksbills from local threats, such as the use of nets. Furthermore, we determined that hawksbills move more extensively out of the current extension on the Caletas Arío Wildlife Refuge (CAWLR), which indicates that turtles are not protected by this management scheme. This information will be integrated in a proposal to extend the CAWLR to protect hawksbill turtles at Punta Coyote.

**c.** We identified other foraging grounds along the Nicoya Peninsula which indicates the importance of the region for the hawksbill conservation initiatives. These sites present similar characteristics of Punta Coyote, but with wider rocky reef habitats, which suggest a major hawksbill population carrying capacity of these sites. These sites will be considered for future studies on the species.

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

Community people, especially fishermen were directly involved along the work at Punta Coyote. They were invited to participate in some field trips and were involved in the work where they learn how to collect important information to study sea turtles. School children were also involved in situations when we caught hawksbill turtles, where they learnt the basics about its biology and the importance of Punta Coyote as a feeding ground for hawksbills. We also made a presentation at a local school, about how to recognize the different sea turtles species, its distribution, and the main local and regional threats for its survivorship.

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

Yes. Our surveys demonstrated the presence of different rocky habitats along the Nicoya Peninsula, where hawksbills are aggregating. For this reason, we pretend to continue the work at Punta Coyote to monitor the local population, and we will establish monitoring programs at the different areas along the Peninsula.

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

A scientific paper is being prepared to be published in a scientific journal. My thesis is already available on line in the Eastern Pacific Hawksbill Initiative web page ([http://hawksbill.org/sitebuildercontent/sitebuilderfiles/tesis\\_javiercarrioncortez\\_2010.pdf](http://hawksbill.org/sitebuildercontent/sitebuilderfiles/tesis_javiercarrioncortez_2010.pdf))

I also already made a presentation to share the results in the next institutions:

- Centro de Investigación en Ciencias del Mar y Limnología (CIMAR), Costa Rica University (UCR), Costa Rica, March, 2010
- 2nd Meeting of the Eastern Pacific Hawksbill, organized by the Eastern Pacific Hawksbill Initiative (ICAPO), Estero Padre Ramos, Chinandega, Nicaragua, July, 2010
- Universidad de León, Managua, Nicaragua, July, 2010

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

The RSG was used from November 2009 to December 2010. This period is comparable with the anticipated length of the project.

**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
Sonic transmitters shipment	3400	2200	3065.54	Some transmitters were donated by the Sea Turtle Restoration Program (PRETOMA). I used the difference to pay for a local person to work as a captain of the boat and other stuff described below

VHF transmitters shipment	1864.8	-	1864	We realized that because of the extension of the study site we did not need VHF transmitters. These type of transmitters are usually used at bigger study areas
GPS	158.86	-	158.86	PRETOMA supported me with GPS equipment
Local captain payment	-	1500	-1500	Payment for the captain for five months of field work
Gas for the boat	575.6	700	124.4	We used more gasoline than we expected
Scuba stuff for diving work at Punta Coyote (four divers)	-	350	-350	I had to pay four diving equipment for volunteers to help me in the work to study the habitat
Equipment – various	-	500	-500	This part of the grant involves the acquisition of materials (e.g. drill to attach transmitter to the turtles, environmental education material) and local travelling
Surveys along the Nicoya Peninsula to identify other aggregation areas for hawksbill turtles: Payment for the captain, gasoline for the boat, food and diving equipment rental for underwater surveys	-	650	-750	This activity was not expected to at the start of the project, however instead of the work expected to be done in Mexico, we used the rest of the money for making surveys along the Nicoya Peninsula
<b>Total</b>	6000	<b>5900</b>	100	

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

The important next steps are:

- To continue monitoring the hawksbill population at Punta Coyote to better understand the tendency of the local population along the time.
- To establish monitoring programmes in other aggregation areas along the Nicoya Peninsula.
- To make studies in order to determine the nesting grounds that correspond to the hawksbills present at Punta Coyote and other areas in the Nicoya Peninsula.
- To identify marine corridors where hawksbill migrate between feeding and nesting grounds in the region. To identify the main threats along the migration corridors.

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

I used the RSG logo in all materials and presentations related to this project. Extra publicity was done by direct contact with people looking for funds for their projects.

**11. Any other comments?**

This project was mainly funded by the RSGF, with the collaboration of the next institutions:

- The Sea Turtle Restoration Program (PRETOMA), Costa Rica
- Universidad Autónoma de Baja California Sur (UABCS), Mexico
- Marine Science and Limnology Research Center (CIMAR), Costa Rica University (UCR), Costa Rica
- Wider Caribbean Sea Turtle Restoration Network (WIDECAST), Costa Rica
- Consejo Nacional de Ciencia y Tecnología (CONACyT), Mexico