

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Marc W. Ward
Project title	Punta Pargos Marine Turtle Monitoring and Protection Program
RSG reference	12794-1
Reporting period	15th December 2012 to 14th December 2013
Amount of grant	£5,973
Your email address	info@seaturtlesforever.com
Date of this report	January 1st 2014

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
1. Conduct night time beach patrols for 3 months (core season) to find nesting sea turtles and map newly-laid sea turtle nests.			X	Rufford Small Grant funds paid for night time beach patrols by local residents (including some former poachers) for marine turtle activity during the core season (mid-December to mid-March) of 2012-2013 (with the actual season spanning 19th September 2012 through to 8th May 2013). These patrollers are trained and supervised by an STF patrol coordinator to monitor activity, secure nests and collect data. The presence of patrollers is critical to not only protect nests from poachers by relocating eggs away from turtle tracks on the beach, but also in deterring the poaching effort. More than 507 occurrences of nesting or attempted nesting were recorded during the core season. Locations of nesting activities were documented with GPS coordinates. Data on these locations is critical for obtaining government support for more conservation management of and enforcement for this unprotected nesting area.
2. Collect data on nest depth and temperature, and count, weigh, measure, and rebury the eggs to hide them from poachers.			X	Nest data was collected for 199 nests located during the core season. This included nest depth and temperature, egg counts, weights, and size. These factors are important in order to document their effect on hatching rate, and to create information on inter seasonal variations in productivity connected to foraging conditions. Relocated nests included 9,669 eggs that were protected from poaching during the core season. This number was a significant contribution to our record of more than 12,000 eggs saved from poachers this season. The additional

				numbers reflect eggs protected In-situ and not trans located.
3. Monitor all relocated nests, and count hatched eggs and/or hatchlings.			X	During the core season, an estimated 8,158 relocated eggs were hatched, determined by monitoring and exhumation of relocated nests during or after hatching. Some of these relocated eggs were buried before the core season, and some of the relocated eggs did not hatch until after the core season because the incubation time is 45 to 65 days. When hatchlings were found, they were weighed, measured and counted to add to our scientific data base. Eggshells remaining in hatched nests provide a way to determine success of relocated and In-situ nests. STF documented a hatch rate of 84.1% during the 2012/2013 season, and documented eight 100% hatches, of which, five were relocated nests and three were protected In-situ.
4. Tag or obtain tag data from at least 50% of nesting females in order to collect population data, individual nesting histories, and nesting locations/movements.		X		During the core season, 36 nesting green turtles were tagged for the first time by STF using aluminium inconel tags provided by the U.S. National Marine Fisheries Service. We feel that we surpassed our goal of tagging 50% of all green turtles nesting on Punta Pargos for the season significantly. Six previously tagged nesting females were re-encountered, and/or retagged due to lost tag(s). These re-encountered turtles gave us documentation of inter-annual nesting periodicity and inter-annual productivity We do not tag olive ridley, leatherback or hawksbill turtles for our research. Tagging data documented important information, such as distances between nest locations (spatial distribution), and the length of time between nesting efforts within a season and between nesting years (inter-annual nesting periodicity) for the same female. Our data also documented turtles nesting on several different beaches in our

			<p>monitoring area, proving that turtles do not always return to the same beach they were hatched on. During the grant period, STF was able to document that there are some green sea turtles that nest at both Punta Pargos and Playa Nombre de Jesus (approximately 50 km north) which is monitored by Parque National Marinas las Baulas. We also documented turtles previously tagged from near Playa Camoneral which is approximately 50 km to the south indicating a 100 km spatial distribution for nesting in the region. This data strengthened our collaboration with the National Park Director, and is important to support more conservation efforts for nesting turtles on Punta Pargos, and more collaboration on data collection.</p>
<p><i>5: Provide 10 marine turtle conservation education programs in the local schools, in order to promote sea turtle conservation.</i></p>		X	<p>Due to the timing of the receipt of grant funds and school vacation from mid-December to early February, this activity was deferred until November 2013. Due to school preferences, entire school assemblies were addressed, rather than individual classrooms as planned. STF's mascot "Turtle Man" (a local Costa Rican) visited four schools with an engaging Spanish language message of sea turtle biology and conservation. Marine turtle biology and conservation films were also shown and more than 140 colouring books with sea turtle conservation messages were distributed to the students. The reception was enthusiastic and heartening (see photos). In addition, STF staff presented an educational slide show program to a travelling outdoor school during summer break in January 2012.</p>

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

Our only significant unforeseen difficulty was when a newly trained volunteer failed to submit field data records to STF staff before moving to Germany. It took some time to retrieve that segment of data and to fuse it back into the database chronologically. The Director had to spend extra time to interpret and enter the missing data, which caused our technical report to be slightly delayed. Absent this extra time, full season report numbers would have been incomplete. One minor difficulty we encountered was unexpected equipment failures and not enough cash resources to immediately replace defective equipment. This issue caused us to lose some data points simply due to the fact that technician's abilities to collect some data were interrupted when equipment broke down, such as GPS units, callipers or temperature probes.

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

a. The Rufford Small Grant was essential in continuation of Sea Turtles Forever's conservation of threatened and endangered marine turtles nesting in the Punta Pargos, Costa Rica area. Grant funds helped save more than 12,000 eggs from being taken by poachers, more than any previous season in our 11-year history of the project.

b. During the grant period, STF was able to document through tagging efforts that there are green sea turtles that nest both at Playa Nombre de Jesus (approximately 100 km north) as well as Punta Pargos during the same nesting season. This is important information to support more conservation effort for nesting turtles in Punta Pargos that are under study by the Parque Nacional Marinas las Baulas staff. This tagging data helped strengthen the bond between STF and the Costa Rica national parks (see photo). We received accolades from their staff and partners as having "the best sea turtle data on the west coast." Our data also contributes information to this little-known population of Eastern Pacific green sea turtles, as well as important information about status of the endangered leatherback turtle. Our data on spatial distribution of intra seasonal nesting was vital to the research being done by the national park staff and will be used in an upcoming paper being authored by Rotney Piedra, the national park Director.

c. The grant funds also helped cultivate a culture of conservation in this poor rural area, by providing an economic benefit from conservation work, and providing education programmes for youth. Grant funds helped pay local residents (including former poachers) to conduct night time beach patrols, and provided economic benefits to local businesses (lodges, restaurants, tour companies) from STF's expenditures and activities. "Turtle Man" has become a popular icon, motivating youth to conserve their marine environment. By including the local people in our operations we have created an incredible change in attitude toward conservation of marine turtles. By creating jobs in conservation for these local people who may have had to rely in the past on some income from illegal harvest of eggs, we have formed an alliance that has made it possible to stop the illegal harvest and avoid violent conflicts. Our team of local trained technicians have large networks of family in the area and by including these men in our operations we also gain the respect and support of many relatives and even former poachers. We have created a value to conservation that surpasses the value of illegal harvest.

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

We consider this to be one of the most important aspects of our work and have described this dynamic in 3(c). The involvement of local community members has been vital to our success. They know that even though the economic conditions of the area are bleak STF patrollers are paid a fair wage and have work when others may not. The community has benefitted from the fact that the marine system has done a comeback due to our work and now we are seeing more fish, lobster and turtles on the local reefs. This is a community that depends on a healthy marine environment and the reef has exploded in life over the last few years. A record lobster season was realised, and more fish on the reef than in the last two decades. Also schools of adolescent sea turtles are once again foraging which had not been seen for years. Foraging sea turtles release important nutrients that are food for the bottom of the marine food web, when sea turtles forage there is an explosion of nutrients that create productivity throughout the food web. This has benefitted the community greatly.

5. Are there any plans to continue this work?

We are absolutely continuing our work on Punta Pargos, this is vital to the area. With the support of RSG, Sea Turtles Forever has been able to grow in credibility, connectivity, and conservation accomplishments which will help sustain our annual efforts.

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

We are partnering with students and faculty at universities in the UK and Texas to analyse some of our data. Dr Wallace J. Nichols, STF Director, regularly attends and speaks at the International Sea Turtle Symposium, communicating STF results with academics, governmental officials, and other researchers. We also are actively redesigning our website to feature results of our work, and regularly post results on our Face book Page (Sea Turtles Forever).

During the grant period, STF hosted 26 field volunteers from the US, Canada and Australia, and more than 30 tour guests from Costa Rica, the US, Canada, the UK and Germany. We were able to share results of our work with this global audience, as well as educate them about the plight of sea turtles around the world.

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

The grant funds were used for activities from 15th December 2012 to 14th December 2013. We anticipated receipt of the grant funds by November 2012, so educational activities planned for that month were mostly deferred to November 2013 (see Objective 5 and Comments above).

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 £1 = US\$1.4663	Difference	Comments
Staff Payments				
Program director	370	493	-123	Data anomaly; extra need
Educational director	738	738		
Administrative director	738	738		
Patrol coordinator	744	744		
patrol assistant #1	522	522		
patrol assistant #2	444	444		
Field Expenses				
Office/housing rent	924	924		
Patrol Vehicle rental	924	924		
Petrol/ Diesel	308	222	86	Spent less during grant period requested
Latex gloves	19	27	-8	More eggs secured; more gloves needed
Educational colouring books	120	104	16	Spent less; used existing stock
Promotional fliers	30	7	23	Spent less during grant period requested
Office expenses	62	55	7	Offset again additional gloves need
Total	5973	5973	0	

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

Given the substantial community connection and seeds of a cultural shift towards conservation of sea turtles, we feel it is important to continue anti-poaching patrols by hiring local residents. We also feel it is important to expand our education efforts to local youth. The local economic benefits from STF work, and the understanding of the importance of sea turtles to the natural resource economy (e.g., fishing), will continue to turn the tide towards conservation.

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?

Yes, the RSGF logo was used on our website and Face book pages as a main grant supporter.

11. Any other comments?

The grant period was a record success for the Sea Turtles Forever (STF) marine turtle monitoring patrols on Punta Pargos. STF surpassed the grant objectives of reducing poaching, collecting more scientific data, and integrating and educating the local community with marine turtle conservation. With the help of the Rufford Small Grant, STF monitoring patrols saved 20% more threatened and endangered sea turtle nests (mostly green sea turtles, but also leatherback, hawksbill and olive



ridley) than any previous year in our 11-year history. Overall, this includes saving more than 12,000 eggs from being taken by poachers during the 2012-2013 season.

Since documenting that nearly all sea turtle eggs laid on Punta Pargos were poached in 2000, STF has developed an effective and environmentally-friendly way to save sea turtle eggs from being illegally taken. Night time patrols and relocation of sea turtle nests away from the nesting females' tracks in the sand (without using hatcheries) have been shown to be an effective way to reduce and deter poaching, while maintaining high hatch rates and an impetus for native habitat protection. With each year of operation our patrollers become more experienced and able to fulfil our mission more effectively. The training they have received is a valuable asset to further our conservation mission on Punta Pargos into the future, and change the illegal harvest of the past into conservation management of the future.

The Punta Pargos area has no special protection for sea turtle nesting beaches, and no local law enforcement. So although there are general laws to protect sea turtles and forbid poaching, continuing the work of Sea Turtles Forever is critical to maintaining sea turtle populations in this poor, rural area. We very much appreciate the support of the Rufford Small Grant program in our direct conservation and educational efforts.