

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	Natalia Botero Acosta
Project title	Diagnosis of the taxonomic composition, spatial distribution, social structure and conservation threats of marine mammals in Tribugá's gulf, Colombian Pacific.
RSG reference	24.08.09
Reporting period	
Amount of grant	£6000
Your email address	greenheart777@gmail.com
Date of this report	September 29 th , 2011

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
Identify the taxonomic composition of marine mammal's community.		x		<p>Six dolphin species were commonly sighted during boat trips: bottlenose dolphin (<i>Tursiops truncatus</i>), rough-toothed dolphin (<i>Steno bredanensis</i>), spinner dolphin (<i>Stenella longirostris</i>), and Pantropical spotted dolphins (<i>Stenella attenuata</i>). We also report a one-time register of common dolphin (<i>Delphinus capensis</i>) and pilot whales (<i>Globicephala macrorhynchus</i>).</p> <p>Humpback whales (<i>Megaptera novaeangliae</i>) represent our only record of a baleen whale. Therefore, we caution that due to the cosmopolitan distribution of Mysticeti, our records show an underestimation of the potential taxonomic composition.</p> <p>Historical records also suggest the presence of killer whales (<i>Orcinus orca</i>) and sperm whales (<i>Physeter macrocephalus</i>).</p>
Describe the spatial distribution of marine mammal sightings along Tribugá's Gulf.		x		<p>Lineal transects were an effective methodology that allowed us to cover a significant portion of Tribugá's Gulf. The spatial distribution of the most commonly sighted species can be described with our data. Nonetheless it also incurred in a sampling bias because the coastal areas were oversampled with respect to the oceanic waters.</p>
Describe the social structure of most commonly sighted marine mammal' species.		x		<p>During the humpback whale breeding season, we registered several kinds of social groups, including mothers with calves and mating groups. Dolphin sightings often included all age classes. In order to provide a more accurate description of the social structure of marine mammals distributing along Tribugá's</p>

				Gulf, its necessary to engage in a more exhaustive sampling system, effectively distributing sampling events during several times of the year, in order to increase our descriptive power.
Describe marine mammals' conservation threats.		x		Walking transects made along the coastline were unsuccessful, mainly due to the apparent rare occurrence of marine mammal stranding events on the area. Nonetheless, during informal interviews a significant amount of anecdotal information was recorded. From this anecdotic information we could infer that the most significant conservation threat would be represented by accidental entanglement on industrial fishing nets.
Generate a permanent link to the local community.			x	During the development of the investigation we were able to gain legal status as a non-governmental organization. Through Macuáticos Colombia Foundation, we have been able to make a permanent link with the local councils and the educative community by means of different educative and cultural activities. We are now a reference for the conservation of marine mammals in the regions, as it is indicated by our participation in the "Migration Carnival", an annual cultural fair that revolves around the migration of whales.
Promote environmental sensibility regarding marine mammals in the local community.			x	Environmental activities intended to promote environmental sensibility regarding to marine mammals, and were performed in five locations disperse along Tribugá's Gulf: Jurubidá, Nuquí, Coquí, Jobí and Arusí. These activities involved children and teenagers attending local educative institutions. Another component of this environmental awareness was achieved with local touristic activities, which is a very positive result in terms of conservation preliminary actions.
Reduce the negative impacts of local whale watching.	x			We registered a few cases of malpractices during whale watching events. However, it is hard to register these impacts in such an

				<p>extensive area, because there are no official controls in the whale watching activities, mainly because whale-watching activities are an opportunistic activity for local communities. In order to reduce negative impacts of local whale watching, it is necessary that authorities keep a record of whale-watching operators in the zone. Our most significant contribution was the promotion of environmental education awareness in the local communities.</p>
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

One of the most difficult aspects for developing the fieldwork was the limited funds that we could gather, even though we received some personal donations and applied to several additional resources including: Society of Marine Mammalogy (SMM), Foundation for the Promotion of Investigation and Technology Fund of Colombia’s Republic Bank, Idea Wild, People’s Trust for Endangered Species Fund (PTES), Conservation Leadership Program (CLP) and Research Fund by the Santa Fe’s Zoological Park in Medellin.

To retrieve this situation, we tried to reduce the sampling period and therefore its associated expenses. This supposed the cancellation of last sampling event.

Another inconvenience was the photograph equipment deterioration due to the extremely high humidity.

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

- a. Our results represent valuable biological information because as we mentioned in our application form, back in 2009, despite the significant amount of biodiversity that this biogeographic region holds, the investigative effort has been focused on two particular areas of the Colombian freshwater and coastal ecosystems.
- b. Environmental educative and sensitisation activities represented a significant bonding experience with the local communities. The local kids, fishermen and general population manifested us they felt part of our research process and this is especially significant in an area that has been characterised as partially reluctant to be involved in collaborative work with researchers. As we mentioned earlier, during the development of the investigation we were able to gain legal status as a non-governmental organisation. Through Macuáticos Colombia Foundation, we aim to strength the links with the communities. Our presence in the “Migration Festival” is a sign of that effort.

- c. Our description of the conservation threats affecting marine mammals in Tribugá's Gulf may be general but it does remark valuable biological data. In fact our preliminary analysis has been used as a reference in an environmental impact assessment. In this way we are directly contributing with the conservation of the coastal ecosystems of Tribugá's Gulf.

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

Binding with the local community and seek their involvement in our fieldwork was one of the priorities the project. During the development of the investigation we acknowledged that enforcement was highly reciprocal both in technical and personal terms. The main aspects are summarised as follows:

- a. Training of touristic operators about basic biology, conservation and ecology aspects of marine mammals.
- b. Environmental sensitisation, especially with infant and scholar aged population.
- c. Active involvement of tourists with the local community and in the conservation activities promoted by Macuáticos Colombia Foundation.
- d. Economical influx to some residents of Coquí and El Valle, as a retribution of the services provided during the fieldwork periods.

5. Are there any plans to continue this work?

Currently some members of Macuáticos Colombia Foundation are working with "Golfina Project", a novel research initiative that aims to create a positive impact in the reproductive processes of several marine turtle's population that nest within the Colombian Pacific Coast. This specific project is being developed in a touristic facility so our personnel have the advantage of being opportunistic passengers of whale watching boats. Within whale watching trips they have been collecting biological data of humpback whales (*Megaptera novaeangliae*) as well as several species of dolphins: spinner dolphin (*Stenella longirostris*), bottlenose dolphin (*Tursiops truncatus*) and spotted dolphin (*Stenella attenuata*).

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

A series of printed documents and guides has been published or is in preparation. These include:

- a. All the personnel of Macuáticos Colombia Foundation are currently working in the construction of a web page that serves as a divulgation mechanism for all our investigative efforts and environmental education activities. This web page will also represent an opportunity for open communication with other researchers, students and the general public.
- b. A report of the main goals and preliminary results of our project has been published in a local commercial, touristic and informative magazine "La Guia de Bahia".
- c. A Bulletin describing the basic findings of this investigation as well as basic information of the biology of marine mammals is being prepared by our environmental education team as a way to share our results with locals and tourists.
- d. Currently we are making the necessary analysis of data in order to fulfill the standards of an international publication as Latin American Journal of Aquatic Mammals (LAJAM) or Marine Mammal Science, among others.

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

RSG funds were used from April to December of 2010. This corresponds to the 55% of the intended sampling period length and to the 82% of the effective sampling period carried out.

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. Todos

Item	Budgeted Amount	Actual Amount	Difference	Comments
Equipment	675.30	685.50	10.20	Price detailed in dollars since equipment was purchased in United States.
Materials	35.10	102.00	66.90	Additional activities of environmental education with local communities increased the amount on this item.
Personnel	1212.00	757.50	454.50	Payments made to the boatman and his helper was proportional to the number of days spent at the sea. The fourth sampling was cancelled and the third was reduced to half. However, some additional boat trips were made on the first two samplings (3 during April-May and 5 during July-August).
Fuel	4792.00	4193.40	598.60	The price of fuel in this area is very unstable and particularly high due to the remoteness of our particular study area. Money spent on fuel was proportional to the number of days spent at the sea. The fourth sampling was cancelled and the third was reduced to half. However, some additional boat trips were made on the first two samplings (3 during April-May and 5 during July-August).
Accommodation	912.00	547.20	364.80	This value describes accommodation expenses for the researchers and volunteers during two complete sampling periods (April/May and July/August) and one reduced sampling period (December).

Food	1200.00	645.90	554.10	This value describes food expenses for the researchers and volunteers during two complete sampling periods (April/May and July/August) and one reduced sampling period (December).
Tickets	1452.00	832.90	619.10	This value describes airplane tickets for the researchers in their three visits to the study area (April/May; July/August and December).
Total	10,278.40	7,764.40	2,514.00	

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

- a. Our main goal remains to develop a long-term research based on the marine mammals inhabiting Tribugá's Gulf. We gladly can say that as part of Macuáticos Colombia Foundation we are a step closer to accomplish that goal. Some of our members are currently associated with "Proyecto Golfina" a research initiative that tries to implement touristic activities that can work as a research platform in the Colombian Pacific. The next step includes guarantying financial support for this new course of investigation. Strategic contacts have been made with local environmental and civil authorities, as well as with the locals and fishermen.
- b. Through Macuáticos Colombia Foundation, we aim to strength the links with the communities and promote new spaces to develop environmental education activities. Our representation as a research organization in the annual "Migration Festival" surely confirms that this has been a successful process so far.
- c. Currently, two of the main researchers, Natalia Botero and Juliana López are already enrolled in a graduate programme related to biological sciences. We intend this new step of academic formation will have a positive impact on reaching a higher spectrum of economic resources that ensure the completion of future studies. This was certainly a difficulty we encountered when searching for funding resources for this investigation, not many of them contemplated funding individuals holding only their Bachelor of Sciences degree.

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?

Rufford Small Grants Foundation was mentioned on several grant applications as our main sponsor. Also, the local communities were aware of the financial support given by the organization.

RSGF logo was present in the educative material used as part of the activities made with local communities (sample included) and all the media related to Macuáticos Colombia Foundation (Advertising banners, pamphlets, Facebook). Additionally, we plan to use it in posterior divulgation actions detailed in the point 6.

11. Any other comments?

Due the lack of information for the marine mammals inhabiting the north Colombian Pacific, this project holds basic knowledge that could be used as a guideline for conservation actions and future research projects. We highly recommend continuing this project in order to improve our current knowledge on the taxonomic composition, social structure and spatial distribution of marine mammals inhabiting Tribugá's gulf. Specific monitoring could focus on the most commonly sighted species, as humpback whales (*Megaptera novaengliae*) and spinner dolphins (*Stenella longirostris*). These kinds of future projects should have an important educational component for the community, in order to support local initiatives in conservation.