

Project Update: November 2018

In this project we aimed to conduct research with leatherback sea turtles (*Dermochelys coriacea*) in Espírito Santo, Brazil. We used multiple techniques to investigate the nesting ecology, population trends and spatial ecology of this endangered population. We also conducted training of local community members in monitoring and research techniques, contributing to long-term conservation.

We consider this project to be achieving its original objectives, specifically:

1. During the fieldwork campaign I worked together with local community members, as well as with many Brazilian undergraduate students and volunteers helping with the turtle monitoring activities. I worked together with TAMAR promoting their training in sampling and monitoring techniques, as well as leading meetings where we would present the results of our research and discuss the biology and conservation of marine turtles and their environment. These young people are key to biodiversity conservation, as they will be the future field biologists leading conservation work and also decision making in Brazil.

2. We successfully conducted night patrols during the nesting season, with the help of local community members. We recorded and protected leatherback turtle nests, tagged and sampled seven nesting females for stable isotopes analysis, as well as deployed thermometers within nests to investigate the nest environment and the sex ratios being produced. The stable isotopes analyses were conducted in the UK and the results from these researches are currently being prepared to be published in peer-reviewed scientific journals, with some interesting findings that will contribute widely for a better knowledge of this population.

3. We successfully deployed satellite transmitters in four nesting females. The data is highly valuable as provides information on inter-nesting habitats (the area the turtles use during their nesting period) and also post nesting migrations, and where they would be more likely to find threats such as fishery bycatch. The tracked turtles transmitted their locations for up to 180 days, with their movements being widely shared in the local community, nationwide in Brazil, as well as internationally. The four nesting females were very charismatic in the village, their routes followed, and their names chosen by the local team representing important characters from their local culture, as a way of bringing local traditions and turtles together. Several media materials were produced with the movements of the tracked turtles, raising environmental awareness towards the conservation of marine turtles and marine habitats. The Rufford Foundation was mentioned in the media material produced, including some examples below and many others in platforms such as Instagram and Facebook:

https://www.exeter.ac.uk/news/featurednews/title_663915_en.html

<http://www.tamar.org.br/noticia1.php?cod=853>

<http://www.icmbio.gov.br/portal/ultimas-noticias/20-geral/9304-na-rota-das-gigantes>

<https://www.funbio.org.br/gef-mar-monitoramento-por-satelite-para-conservacao-de-especies/>

<https://www.youtube.com/watch?v=4dV8LYw2W3g>

http://www.nationalgeographic.com.es/naturaleza/actualidad/brasil-a-tristan-acuna-ifinerario-fubica-tortuga-marina-hembra_12826/1

<https://phys.org/news/2018-06-turtle-tagged-brazil-uk-territory.html>

<http://blogs.exeter.ac.uk/exetermarine/2017/07/03/marine-turtles-of-brazil-education-research-and-conservation/>

<http://seculodiario.com.br/36634/10/tartarugas-gigantes-capixabas-sao-monitoradas-via-satelite>

The results from this research also directly contribute to conservation management, as the information on movements and foraging strategies are particularly relevant for the establishment of protected areas. Management plans are being discussed for the region and they consider the information provided by our research.

Finally, the dissemination of the scientific outputs of this study, through peer-reviewed publications, presentations at international conferences and social media platforms, which are planned to occur before the completion of this project in April 2019, will emphasise the importance of this highly endangered leatherback turtle population. Those strategies help to promote awareness and potentially facilitate the establishment of future partnerships that could result in continued funding for marine turtle and biodiversity conservation.



