

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	Michelle Ivonne Ramos Robles
Project title	Monitoring ecological interactions to create awareness of tropical ecosystem conservation
RSG reference	20438- 1
Reporting period	October 2016 to October 2017
Amount of grant	£5000
Your email address	ramosrobles.m@gmail.com
Date of this report	August 2018

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
Conduct field sampling to record the interactions between frugivorous birds and plant species				From November 2016 to August 2017, 38 field samplings were carried out. In some samplings it was difficult to observe interactions due to bad weather, however, about 1,300 plant-bird interactions were recorded.
Elaboration of a field guide				We made a field guide based on the interactions between 10 plant species and the birds that consumed their fruits. We share 30 printed guides to the Ecoguides of CICOLMA and to schools that held workshops. Students and teachers liked the presentation, structure, and design of the guides.
Environmental education workshops				Workshop activities included words puzzle, crossword puzzles, photo puzzles, masks, and the activity "Ecological Interactions Olympiad". These activities were carried out with approximately 250 elementary and high school students. Additionally, we held two talks for approximately 100 students from a regional university. All the students showed great interest in the workshops and talks.
Publish papers				We published the article "The Ecological Interactions Olympiad: A classroom activity for reinforcing scientific knowledge" in the journal American Biology Teacher. This article is a product of the workshops held at a high school in the locality Tinajitas. However, the scientific article about plant-bird frugivorous interactions recorded in the field is still in process. Additionally, we are preparing two other disclosure articles for publication about the ecological interactions.

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

During the interaction records in field, we had some difficulties related to bad weather (November-December) and also in some plant species, we recorded few interactions with frugivorous birds. It was also complicated to have adequate photos of plants and birds for the field guide. In relation to the workshops, we had some logistical difficulties to work with many students. Finally, we are analysing the data about the temporal variation in interactions diversity of frugivorous bird species.

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

- Article: "Olympiad: A classroom activity for reinforcing scientific knowledge" DOI: 10.1525/abt.2018.80.5.365. In this article, we propose a dynamic classroom activity for teaching ecological interactions between plants and frugivorous birds. However, we propose that this teaching strategy can be applied in other ecological concepts.
- Environmental education workshops. We held workshops and ecological talks in a wide educational spectrum, including students from elementary school to university.
- Field guide: "Árboles y arbustos de La Mancha y sus interacciones con aves". We elaborate the guide that includes 10 plant species and shows the main birds species that consume their fruits. Additionally, each page of the guide included a general description (ecological, biological and traditional uses) of every plant species.

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

The activities (workshops and talks) and products (field guide) of our project allowed the active participation and benefit of local teachers, students, and guides (ecotourism). In the educational aspect, our activities showed teachers and students the value of ecological interactions for their community. Also, the field guide we shared with the ecotourism tour guides will facilitate them to identify and show the local plants and birds interactions to the tourists.

5. Are there any plans to continue this work?

Our interest is to continue promoting awareness about the importance of ecological interactions. However, at this time we cannot continue with this project, due to logistical difficulties related to our current work and academic activities. Therefore, our current Rufford project will conclude with the publication of pending articles.

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

We shared 30 printed guides to the Ecoguides and to some schools of La Mancha. We also publish an article in an international journal for teachers (American Biology Teacher). In addition, we have considered two articles pending publication.

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

We used the grant from the beginning of the project (November 2016) to cover all the expenses of the activities and products (field guide and article publication).

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. 1 £ sterling = 22 pesos mexicanos

Item	Budgeted Amount	Actual Amount	Difference	Comments
Field work (Fuel, Foods, Accommodation, Road toll payment)	2150	1787	363	The cost of fuel and tolls increased in Mexico, but we also obtained support from the Institute of Ecology, A.C., and (INECOL) to considerably reduce the cost of accommodation.
Field equipment	800	436	364	We obtained discounts at local stores for accessories for photography. We did not buy the binoculars because our field assistant provided them to us. We also did not buy GPS equipment, because with our mobile phones the geographical coordinates were obtained accurately.
Field assistant	500	760	-260	The activities of our field assistant increased from 25 to 38 days.
Production of the field guide	500	545	-45	The payment of the graphic designer and the materials for the printing and presentation of the guide increased.
Environmental education workshops (Fuel, Foods, Road toll payment)	1050	1150	-100	The cost of fuel and tolls increased in Mexico. In addition, we held talks at a local university that we had not previously considered.
Publication of articles	0	386	-386	We cover unbudgeted expenses related to the publication (subscription to journals) and translations to English.
TOTAL	5000	5064	-64	

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

- a) Give continuity to workshops and talks about ecological interactions at all educational levels.
- b) Carry out similar projects, including workshops and specific field guides, in other locations in Mexico where biological diversity and human settlements converge.

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?

The Rufford Foundation logo was used in the workshops and talks (power point slide and team t-shirts), as well as in the field guide. In the article published, the RSGF was mentioned in the acknowledgments section.

11. Any other comments?

We greatly appreciate the support provided to carry out our project.