

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	Orestes C. Bello González
Project title	Assessing lake-to-lake heterogeneity as a tool for conserving the interior wetlands of Sabinal Key, Cuba
RSG reference	12304-1
Reporting period	September / 2012 and September / 2013
Amount of grant	£4834
Your email address	ocbellog@gmail.com , obello@ecologia.cu
Date of this report	September 2013

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 increase the knowledge base on the biodiversity of the biota that inhabits or otherwise uses the lakes			X	
To establish the relationships between the diversity and composition of key animal groups (aquatic macroinvertebrates in particular) and physical/vegetation characteristics of lakes			X	
To develop a lake typology			X	
To propose a scale of conservation priorities across all lakes and management measures to be taken for each class of lakes in turn			X	
To develop maps showing the distribution of regions with lakes having high conservation priority			X	

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

During the development of the project we had some difficulties with the terrestrial access to the island during the rainy season because the bad quality of the ways but we solved it using a boat to come. We had to delay an expedition because the abundance of mosquitos was very high and the work was almost impossible. We recover it extending a few days more the following expedition. The drinkable water was scanty in some places of the key so we had to buy some tanks to transport and to store water and use it only in the most urgent needs (to drink and to cook).

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

- We identify 72 species of plants, 56 species of macroinvertebrates, two species of macroalgae, 11 species of microalgae and three species of fishes. More than 50 % of the species are new records for Sabinal Key. Three of the species never had been recorded in Cuba. With these results we increase the information about the territory contributing with scientific information to taking decisions and to the update of management plans.
- The obtained typology, the maps and the identification of conservation priorities inside the lake's types provide a practical tool for the conservation of these. These elements can be inserted in the process of decisions taking for the tourist development of the key since they offer scientific arguments to having in mind for: the location of constructions, location of zones of extraction of materials and waste deposition areas. In addition, we has located lakes or types of lakes with great attractive and with the potential of be included in the plans of tourist development of the territory.
- We achieve the insertion of several lakes as focal conservation objects in the management plans of Sabinal key, these lakes are, from this year (2013), focus of the monitoring programmes. These actions bring legal arguments for the conservation of the lakes.

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

In Sabinal Key local population does not exist.

5. Are there any plans to continue this work?

We have plans to extend this work to Coconut Key and continue in Sabinal Key at the same time. Both keys have similar landscape characteristics but the first one is nowadays assimilated by the tourist activity (several hotels, airport, golf course, fumigation for control of mosquitos, etc). We want to realise a comparative analysis that shows the consequences, for the different types of wetlands, of the development without bearing in mind a consistent strategy of conservation.

We want to apply the obtained typology in the lakes of Sabinal Key to those of Coconut Key and then we will to realise an observed versus expected analysis in every type of lake. We will consider the indicator species obtained in this project that concludes and we will use to Sabinal's lakes as reference. With these results we will be able to bring scientific facts supporting the establishment of conservation priorities to extend the scope of this strategy to Key Coconut and probably to the rest of the big keys of the North of Cuba. We hope to increase the integration of the wetlands and the islands in to the plans of tourist development of the territory.

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

Up to the moment we have realised several presentations in international meetings (International Convention of Environment, Congress of the Meso-American Society for the Conservation Biology and the International Symposium of Zoology) in that we have announced the obtained results. There are in advanced phase of preparation three publications derived from results of the project. Once obtained the publications will be available to download from the web site of the Institute of Ecology and Systematic. The principal results of the project have been commented by radio stations of provincial scope. In the immediate future we will continue promoting the results with special emphasis in the massive media as the radio, television and local newspapers.

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

The funds were used between September / 2012 and September / 2013 as it was planned initially in 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
Guide service	100	100	0.00	
Transportation	1062	956.00	-106	We found an alternative with minor price for the last expeditions
Field Boots	72	72	0.00	
Backpacks	60	94.00	+34	The initial price of the backpacks was calculated on the basis of a special offer

				that had expired when came the moment to buy them
Fuel	240	380	+140	An additional expense of fuel was realised when a ship was used for coming to the key because the way for land was impassable
Food supplies	800	800	0.00	
Desktop computer	900	938.00	+38.00	Existed only at that price at the time of purchase
Microscope	1000	898.00	-102.00	We found a better price with the same features
Printer	300	327.00	+27.00	Existed only at that price at the time of purchase
Printer toners	150	150	0.00	
Sheets	150	107	-43.00	Only use premium paper for more important tasks.
Total	4834	4822	-12.00	

Rate of conversion: 1 Sterling Pound = 1.49 CUC

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

Continue to disseminate the results especially in the context of decisions makers (Ministry of Tourism, Institute of Physical Planning), the national scientific community and local authorities.

Develop similar studies in Coco Key, documenting the direct and indirect consequences of tourism development without consistent strategy for wetland conservation of the great Cuban keys. These studies would provide a unique opportunity to compare two areas with similar geographical and biological characteristics but with a history of very different socioeconomic assimilation. Coco Key could be the future of Sabinal Key.

Achieving insert several of the lakes or lakes types as natural objects of interest for touristic activity to integrate it more into the territory development plans and allocate resources and attention to the conservation of these wetlands.

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's logo has been used in three presentations at international events where partial results of the project have been shown. Currently we are working on a publication on the biodiversity of inland lakes of Sabinal Key where we gratefully acknowledged to Rufford for the imperative collaboration. The logo and acknowledgments appear in the reports submitted and discussed with the institutions responsible for the development plans of Sabinal Key.