

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	Yarelys Ferrer Sanchez
Project title	Status and Conservation Strategy of Diurnal Raptors of a Wetland in Cuba. Phase III
RSG reference	16984-B
Reporting period	February 2015-February 2016
Amount of grant	£10000
Your email address	yferrersanchez@gmail.com
Date of this report	February 26 th , 2016

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 determine the distribution, status and productivity of diurnal raptors (monitoring program)			X	Scientific publication: Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2016): How rare species conservation management can be strengthened with the use of ecological niche modelling: the case for endangered endemic Gundlach's Hawk and Cuban Black-Hawk. <i>Global Ecology and Conservation</i> . 5: 88-99.
To training the protected areas workers, people of communities, farmers, tourism employee and builders			X	
To promote the values of raptors in local communities, farms and touristic sector through the development of environmental campaigns			X	

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

We had some problems in order to get pictures of birds in Morón city, due to the people lack of awareness. In around 50 new houses we didn't receive a good acceptance when we were explained the project objectives. We have to make a stronger and constant campaign dissuading the purchase of wildlife for use as pets.

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

Raptor ecology and monitoring program

Before the Rufford Small Grants in the northern of Ciego de Avila, information about raptor ecology, distribution and abundance didn't exist. Nowadays, we can deliver

baseline information to protected areas to implement management activities and to prioritize monitoring sites mainly to endemic species.

For instance, we published a recent article with a conservation approach:

Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2016): How rare species conservation management can be strengthened with the use of ecological niche modelling: the case for endangered endemic Gundlach's Hawk and Cuban Black-Hawk. *Global*

Ecology and Conservation. 5: 88-99.

I concluded my PhD thesis entitled: Variables que influyen en la distribución y abundancia de rapaces diurnas y en la ubicación de sus sitios de anidación en Cuba.

Moreover, we generated binary geographic distribution maps of the resident and migrant raptors on occurrence data. The relative contributions of the environmental variables to the Maxent models were analysed. In this moment, we are writing a paper about the influence of anthropogenic activities on the distribution of raptors in the project site.

Training program

According to the needs of conservation and human capacities in protected areas we trained three new technicians of two protected areas inside the wetland. With the project activities we achieved to incorporate four persons of three communities to the labours of one protected area (El Venero) as protected area technicians. The training program must be permanent in the next years and will be incorporated in the schedule of protected areas.

Environmental campaigns

Posters, informative pamphlets, annual festival and other activities made possible the sensitization in the communities with conservation problems, the increase of the knowledge about the values of raptors and the wetlands. On this stage we reached ten communities.

We carried out the captive bird census getting alarming results (see Appendix 1). We took a census in nine communities identifying 24 species and 973 birds (Appendix 2). This is only a sample of the amount of captive birds. We are writing a paper about the distribution and abundance of captive birds in urban and rural zones of the wetland: wild population implications.

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

Like previously, several local people collaborated with us preparing the activities for the community festival. Each school has didactical pamphlets showing raptors characteristics and its ecological importance. Also, they incorporated information about the consequences of wild-bird trade. These materials support educative activities in schools and communities. We lecture teachers and environmental specialists in rural schools, local people in communities and fifteen farmers in relation

with the wetland importance, biodiversity, raptors and its role in the ecosystem. We continue with the raptor campaign expanding our conservation efforts in space and time.

The main benefit of the communities has been the increasing of awareness and knowledge about the conservation of wetland in general and raptors in particular. We achieved the incorporation of four new young persons of the communities in the protected area activities as salaried workers, strengthening the relationship among communities and protected areas and contributing to a better life style.

5. Are there any plans to continue this work?

Yes, we will continue with the objectives of this project in the long-term. We achieved fruitful experiences with the project team, with the raptor monitoring program, together with the environmental activities with this project. We consider evaluating the long term success of the project will be very important for the species conservation. Also, we are surprised with the amount of captive birds like endemic and migratory species people have. For this reason we want to get inside in the environmental campaign if a new project is approved. In addition, I will study other regions of Cuba and South America with a similar protocol in order to have a comparative baseline and to increase the knowledge and protection of species.

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

Our results (joining information of the first, second RSG and Booster) have been presented to the staff of protected areas to contribute to the design of management plans and recovery strategy per threatened species. Also, the national level of the Flora and Fauna Enterprise has these results to discuss with CICA (Centro de Regulación y Control Ambiental) the alarming situation has been observed with captive birds in local communities and cities of the central region of Cuba.

In the other hand, results have been presented in:

- XVIII Congreso Sociedad Mesoamericana para la Biología y la Conservación, 13-17 October 2014, Copán Ruinas, Honduras. **Hábitat de anidación de *Buteogallus gundlachii* en Cuba: implicaciones para su conservación.** (Appendix 3)
- The 38th Annual Meeting of the Waterbird Society and The XIII Conference for the Study and Conservation of Mexican Birds organized by CIPAMEX, 4-7 November 2014 in La Paz, BCS, Mexico: 1. **Use of ecological niche modelling for habitat characterization and conservation strategies of endemic raptors in Cuba: case of Gundlach's hawk and Cuban black-hawk;** 2. **Hábitat de anidación de *Buteogallus gundlachii* en Cuba: implicaciones para su conservación.** (Appendix 4)
- X Convención Internacional sobre Medio Ambiente y Desarrollo. 6-10 July 2015. La Habana, Cuba. **American kestrel breeding habitat in the island of Cuba: nest-site selection and nesting area potential distribution.** (Appendix 5)

- XV Semana de Posgrado en Baja California Sur. La Paz, B.C.S., México. April 2015. (Appendix 6)
- I CONFERENCIA CIENTÍFICA INTERNACIONAL UTC – LA MANÁ 2016. 14th January 2016, Universidad Técnica de Cotopaxi, Extensión La Maná, Ecuador.
Modelaciones ecológicas para la conservación de especies en peligro.

Papers published with the support of the Rufford Small Grant Foundation:

- Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2014): Partial Albino Turkey Vultures (*Cathartes aura*) in the Island of Cuba. *Ornitología Neotropical*. 25: 119–122.
- Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2014): Notas sobre anidación del Gavilán Colilargo (*Accipiter gundlachi*) en Cuba. *Ornitología Neotropical*. 25: 1–7.
- Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2015): Man-made environments relationships with island raptors: endemics do not cope with habitat changes, the case of the island of Cuba. *Biodiversity and Conservation*. DOI 10.1007/s10531014-0819-y.
- Ferrer-Sánchez, Y.; R. Rodríguez-Estrella (2016): How rare species conservation management can be strengthened with the use of ecological niche modelling: the case for endangered endemic Gundlach's Hawk and Cuban Black-Hawk. *Global Ecology and Conservation*. 5: 88-99.

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

The Booster grant was used over 12 months from February 2015 to February 2016.

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£ ~ 1.5 Convertible Cuban pesos (CUC).

Item	Budgeted Amount	Actual Amount	Difference	Comments
Laser printer	150	250	-100	Prices have risen
Printer toners	200	230	-30	Prices have risen
Batteries	50		50	
Office material	300	330	-30	Prices have risen
Theatre materials	500	500		
Environmental education materials	500	500		
Raptor informative materials	900	860	+40	We reorganized the budget for price increases in some materials
Wild birds informative materials	500	590	-90	Prices have risen
Internet service	270	300	-30	Prices have risen

Transport to field areas	94	94		
Car rent for the road transects	2160	2160		
Fuel	1296	1300	-4	
Food for 4 workers (in field camps)	1440	1440		
Snack for children	1100	1050	+50	We reorganized the budget for price increases in some materials
Gifts for children	540	515	+25	We reorganized the budget for price increases in some materials
Total	10000	10119		

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

- To continue developing an intensive and sustained environmental campaign dissuading the purchase of wildlife for use as pets.
- To conduct an on-going training programme of protected area workers in other regions of Cuba, in order to initiate studies of raptors and a monitoring program.
- To develop a national programme for the study and conservation of diurnal raptors in Cuba.
- To divulge the project results in all centres of environmental regulation and the National System of Protected Areas in order to implicate more institutions in our campaign.
- To publish our results in scientific and dissemination journals.
- To implement information about raptors in management plans of protected areas, using an adaptable management approach in a long-term.
- To looking for new support to expand our conservation activities in other regions of Cuba, giving priority to environmental campaigns and education activities.

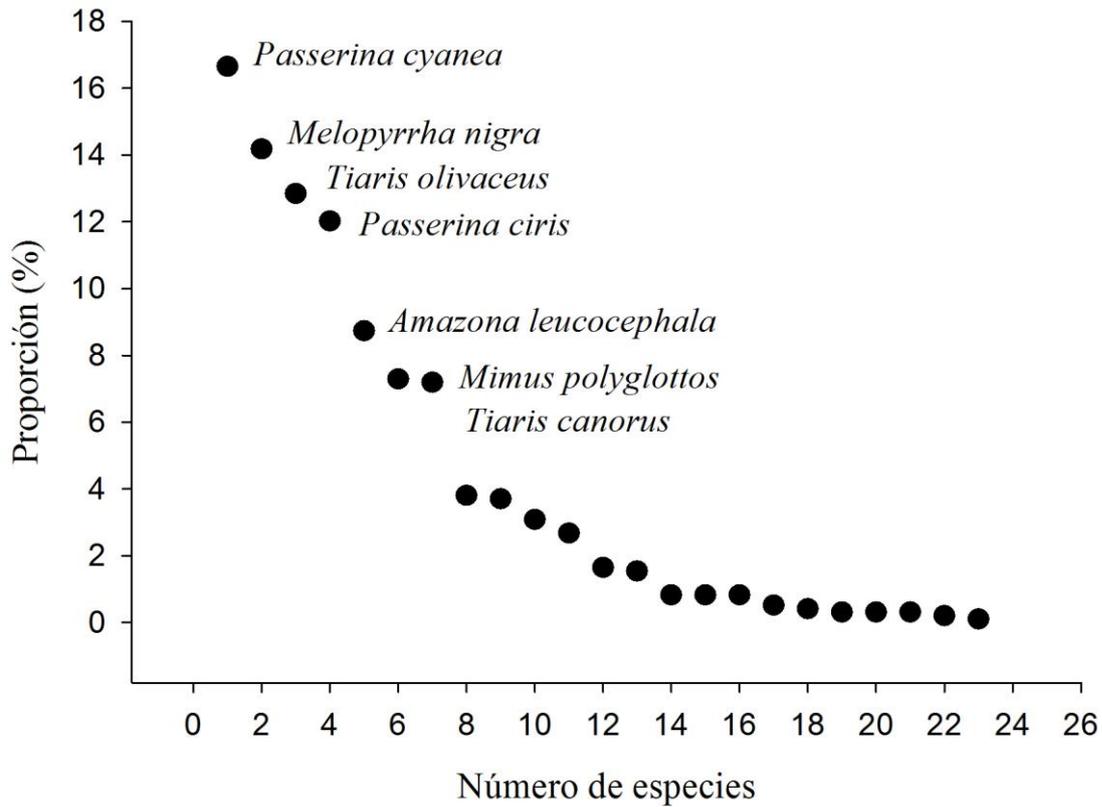
10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

Yes, logo was included in all our local and scientific presentations (e.g. meetings, workshops, congress, poster), as well as in lectures and talks in schools, communities, farm, inside the wetland and reports to protected areas.

11. Any other comments?

We are very thankful to Rufford Foundation for all the support, allowing us to contribute to the raptor conservation in Cuba.

Appendix 1. Frequency of species recorded as pet birds, represented as the percentage of the total number of the sample.



Appendix 2. Proportional abundance of bird species recorded as pets in the urban and rural zones of the wetland.



Appendix 3. XVIII Congreso Sociedad Mesoamericana para la Biología y la Conservación.















**CONGRESO DE LA
SOCIEDAD MESOAMERICANA PARA LA
BIOLOGIA Y LA CONSERVACION**

**Entrelazando culturas y biodiversidad,
patrimonios de mesoamérica.**

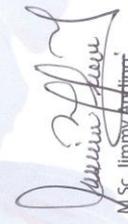
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Yarelys Ferrer-Sánchez

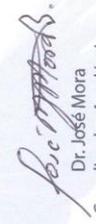
Por su participación como **PONENTE**, durante el
Simposio "*Promoting protection of at risk habitat through priority species conservation*",
con el tema:

"Hábitat de anidación de *Buteogallus gundlachi* en Cuba: implicaciones para su conservación"

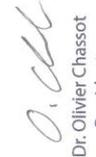
realizado en el marco del XVIII Congreso de la Sociedad Mesoamericana para la Biología y la Conservación
Copán Ruinas, Honduras, del 13 al 17 de octubre de 2014.



M.Sc. Jimmy Avila
Coordinador General
XVIII Congreso Sociedad Mesoamericana
para la Biología y la Conservación



Dr. José Mora
Coordinador Académico
XVIII Congreso Sociedad Mesoamericana
para la Biología y la Conservación



Dr. Olivier Chassot
Presidente
Sociedad Mesoamericana para la
Biología y la Conservación



Dr. Josiah Townsend
Coordinador del Simposio
Indiana University of Pennsylvania (IUP)



Appendix 4. The 38th Annual Meeting of the Waterbird Society and The XIII Conference for the Study and Conservation of Mexican Birds.



El Comité de la 38 Reunión Anual de la Waterbird Society
y XIII Congreso para el Estudio de la Conservación de las Aves en México

Otorga la presente

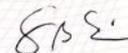
Constancia

a: Ferrer Sánchez, Y.; Rodríguez-Estrella, R.; Martínez Morales, M.A.

Por su participación como ponente Oral
Hábitat de anidación de *Buteogallus gundlachi* en Cuba: implicaciones para su
conservación.

La Paz, Baja California Sur del 4 al 7 de Noviembre del 2014


Dr. Ricardo Rodríguez Estrella
Coordinador General de la 38 Reunión
Anual de la Waterbird Society y la XIII CECAM


Dra. Susan B. Elbin
Presidente Waterbird Society


Dr. Fernando Villaseñor Gómez
Presidente CIPAMEX



El Comité de la 38 Reunión Anual de la Waterbird Society
y XIII Congreso para el Estudio de la Conservación de las Aves en México

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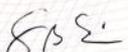
Constancia

a: Ferrer Sánchez, Y.; Rodríguez-Estrella, R.

Por su participación como ponente Póster
Use of ecological niche modelling for habitat characterization
of endemic raptors in Cuba.

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Dr. Fernando Villaseñor Gómez
Presidente CIPAMEX

Appendix 5. X Convención Internacional sobre Medio Ambiente y Desarrollo



Appendix 6. XV Semana del posgrado en Baja California Sur.

