

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	Julián Padró
Project title	Arthropods Field School in Desert Ecosystem
RSG reference	13701-1
Reporting period	03/2014 – 01/2015
Amount of grant	£4968
Your email address	Padrojulian@ege.fcen.uba.ar
Date of this report	29/06/2015

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
Train students in methods of sampling, data analysis and theoretical framework (bioindicators and sustainable practices)			100%	During 2014, three field surveys were conducted, along with theoretical lessons of the representative features of the most common groups in the area, including its advantages as environmental bioindicators. Practical classes of identification, assembling of traps and trapping techniques were also performed
Use taxonomic keys and "DNA barcoding" along with the assistance of taxonomists from the entomology lab of Buenos Aires University to identify specimens.		90%		We have design a specific booklet especially made for the students to use taxonomic keys to identify specimens. We also incorporated the participation of a researcher from the entomology lab (UBA) to help with it and calculated richness and abundance biodiversity indexes. We sequenced 200 individuals (many more are in the process of sequencing).
Elaborate a technical report for the Environmental Agency of the province reporting the results			100%	We have elaborate a technical report to the Environmental agency including the main findings such as diversity indexes, new species records for the area (province and country level) and we also incorporate a list of plant species in the area.
Deposit holotypes in the collection of the Argentinean Museum of Natural Sciences in Buenos Aires		75%		We have added more than 500 identified specimens to the collection of the museum including new (<i>Meriola decepta</i>) and rare species (<i>Neogene carrerasi</i>). Many more are under way.
Create an Arthropod Collection as well posters, signalling boards and field guides for the Natural Reserve Interpretation Center			100%	We have assembled three entomological boxes to create the first arthropod collection of the natural park. With the gathered data throughout the project, we have performed two posters and 400 brochures that today are material of tourist information at the park entrance

				office.
Communication of the results in scientific media			100%	We have presented the results of the survey in the IX Argentinian entomology congress 2015 (held in posadas, Misiones) and the project was presented in the II RSG conference South America 2015 (Valparaíso, Chile)

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

During the first trip in March 2014 to the natural park we have brought six students of Buenos Aires University (UBA) in order to work together with the local school. We set a research outpost inside the park with the UBA students in order to study the more wild areas of the park, while a mixed team with local and UBA students will survey the locations close to the main circuit. However during our trip we have witnessed one of the largest floods in the area (never seen in a 100 years). The flood blocked all entrances to the park isolating our outpost for 10 days. However, we been able to keep working (the sampling was greatly enhanced by such humidity conditions that favoured the emergence of arthropods) by renting mules and donkeys to reach the town (13 km away) by a mountain path and buy supplies every 2 days. Finally we were able to leave the park with the help of the Environmental agency logistics and return with the samples to UBA. Since we were unable to work with the local community in March 2014 as planned, we arrange an extra trip during April 2014 to work with them for an entire week.

<http://www.tiempodesanjuan.com/departamentales/2014/3/14/valle-fertil-otra-complicado-lluvias-crecio-estan-aislados-52388.html>

http://www.diariodecuyo.com.ar/home/new_noticia.php?noticia_id=613754

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

- i) The involvement of the local community (especially young students) in science activities aimed at environmental conservation. A reflection of the success of the project was the implementation of the project into the school curriculum for its continuation during 2015.
- ii) From the present experience we have established new links with local institutions (schools and municipality), as well strengthened the former ones (environmental agency). In particular, the local office of the national agricultural agency (INTA), has contacted us (due to our work in the school) to propose a future joint effort to develop a project of characterisation of native bees in the Natural Park Valle Fertil.
- iii) The results of the species found represent the first list of species in the park (3242 specimens belonging to four classes and 24 orders) including findings of new records and distribution expansion of others. Also, these results allow

understanding the composition of species, needed in order to assess future changes in the environment.

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

The involvement of the community was very positive from the start, and embraced the project with enthusiasm. Local employees of the regional environmental agency provided us with permits and logistics for all our field trips. The local school performed the selection of students for the project according to their qualifications and assign teachers to help during tasks while providing the necessary facilities. The school also organised a visit day for parents and prospective students in order to witness the participation of the school with science activities in joint with Buenos Aires University. The local community in this case represented by the school, received booklets for identifying typical arthropods in the area (made for this purpose), along with all materials needed to continue activities (nets, traps, reagents, boxes, magnifiers, etc.) and a collection of arthropods in order to meet the local entomological fauna. Also the results of the students' work are today embodied in posters and brochures in the park office. The school has enriched its annual list of projects through the incorporation of this biology project for continuation in 2015.

5. Are there any plans to continue this work?

One of the UBA students involved in the present project and a collaborator in the DNA barcoding project has applied a thesis proposal for a PhD scholarship at UBA, to characterise cryptic and endemic species (focused in local adaptations) in the Valle Fértil valley. The assignment of the scholarship (the results will be released in December 2015) will establish a research line that will guarantee the continuity and deepening of the arthropods research in the area for another 5 years. Also, at the present moment, we are working with the national agricultural agency in a framework agreement to characterise native bees in the valley. The framework foresees to train local institutions to perform the field work of trapping and study diversity indexes of native bees, while we expect to collaborate in the molecular characterisation.

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

We have communicated the preliminary results in two posters and brochures design for tourist information, deposited in the natural park entrance office. We have also presented the survey results in the IX Argentinian Entomology Congress 2015 (held in posadas, misiones) and presented the project in the II RSG conference South America 2015 (held in Valparaiso, Chile). We also reported the results to the province environmental agency (technical report). Finally we had meetings in BA with other RSG projects (Ecological Study of the White-Winged Nightjar) to share material and experiences in working with local communities. At the present there is a creation of a collaboration-network between all participants of the II RSG conference 2015 to share our experiences as well.

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 grant was used between February and December 2014 in three field trips (March, April and December), which partially matches the proposed working timeline, with an addition of December in order to extend the surveying time of arthropods during the year by the students (the students had another field trip with their biology teacher during October) for further taxonomic identification classes of the material collected and creation of entomological boxes, posters and brochures.

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.

Exchange rate of the funds performed by the BBVA bank in Argentina was £1=13ARS (24/02/2014).

Item	Budgeted Amount	Actual Amount	Difference	Comments
Project staff and 10 Students trip (go and back from Buenos Ariess to San Juan)	£2305	£2443	£138	We also rented donkeys to carry supplies for field work.
Food and supplies for 10 days	£862	£900	£38	
Outdoor equipment for fieldwork	£351	£530	£179	Gas cartridges, mountain heaters, thermos and outdoor lamps
Printing of posters, illustrations, certificates and field guides	£650	£500	£150	We printed a total of three posters, 50 booklets and 400 brochures, 20 certificates
Didactic material for students	£400	£400	0	shovels, entomological forceps, magnifiers, sweeping nets, pitfall traps, beating sheets, reagents, vials, lamps, containers, flasks, etc.
4 UHF radio communication	£400	£378	£22	We bought the 4 radios plus 1 GPS
Total	£4968	£5151	£183	

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

Looking ahead I feel is important to keep working in scientific projects aimed to conservation including the participation of the local schools in Valle Fertil. The performance of long term endeavours throughout conservation activities with the participation of the new generations will help to establish a paramount stepping stone in the shift to a new paradigm of environmental awareness in the community.

My goals for the future are to keep working with different specialists in different areas to research threatened species living in the natural park. With the help of these specialists my aim is to link conservation activities with local schools in order to make them participate of the nature protection.

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 all material produced by the project, including booklets, posters, brochures, certificates, and Powerpoint presentations. The publicity of the RSGF stands on the impact of the material produced in the areas presented: Valle Fertil Natural Park entrance office, Valle fertile community (schools) and Scientific Congresses.

11. Any other comments?

This project gave me a great opportunity to work with local people and share together a great experience by working towards a common goal. I feel it really enriched my understanding of the local concerns that often shape the environmental activities in the protected areas. For the future I am interested in building and enhancing collaborative relationships between researchers of different areas such as conservation, environmental management and ecologists to create multidisciplinary frameworks for long term conservation strategies.









