

## 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. 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. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole Grants Director**

Grant Recipient Details	
<b>Your name</b>	Pablo Guerrero
<b>Project title</b>	Demographic dynamics of a Critically Endangered cacti: <i>Eriosyce chilensis</i>
<b>RSG reference</b>	15213-1
<b>Reporting period</b>	2014-2015
<b>Amount of grant</b>	£6000
<b>Your email address</b>	Pablo.c.guerrero@gmail.com
<b>Date of this report</b>	07-02-2015

**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
Estimate and project the demographic and distribution trend of <i>E. chilensis</i>		x		We complete recording the information of adult survival, distribution and species densities. However, we need to expend one extra year to obtain more information about seedling dynamics (to conduct models of demographic trends with more confidence).
Design and apply outreach tools into local community			x	We design an informative paper sheet to help people to recognize the target specie in the field. We conducted outreach activities in two local schools.

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

Monitoring seedlings was more difficult than expected since the small size of the stage after germination complicate following them. To solve this problem, we employed high resolution photographs.

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

1. We discovered that the target species has problems in the pollination process in some areas of its distribution. This result can indicate that some populations can be experiencing an incipient allee effect that could in the future pull the species to an extinction vortex.
2. We estimated some key demographic parameters such as adult survival, fertility and seed germination.
3. People (kids and adults) from the local community now can recognize the species in the field, and the species has become an iconic cactus of the town.

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

We conducted a campaign to promote the education of the target species (field recognition and ecological importance) and biodiversity in general. Also, we perform outreach activities in two

schools and oriented to kids of 9-11 years, after giving talks to them we went to the habitat to see all the cactiflowering.

**5. Are there any plans to continue this work?**

We definitely will continue our work because there are many scientific questions that we need to answer to ensure the conservation of the target species in the long term, for example we will test whether the pollen limitation is leaving a genetic signature. Also, we will continue working on trying to ensure the conservation of the habitat and include the area into the Extinction Zero Programme. Finally, we will conduct field experiments to understand recruitment limitations.

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

We will continue the distribution of informative documents that were designed to be attractive to adults and kids (> 9 years), but also have relevant information for the taxonomic identification of the species and also contain basic ecological information.

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

We used the grant between May 2014 and February 2015.

**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
Estimation of demographic parameters	3500	3500	0	
Build demographic projection matrixes	800	800	0	
Model geographic distribution	800	800	0	
Outreach activities	900	900	0	
Total	6000	6000	0	

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

We will continue promoting and working for the conservation of the habitat, because several economic pressures aim to convert the area in a place with houses for summer holidays. Following this we will continue educating local people authorities about the uniqueness of the area because harbour many threatened and endemic species, and among them *Eriosyce chilensis* is one of the more important due the very narrow distribution.

**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?**

Yes, we print an informative document that included RSGF logo.

