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	Tarin Toledo Aceves
Project title	Seed Trees for Cloud Forest Restoration
RSG reference	14476-1
Reporting period	February 2014 to January 2015
Amount of grant	£6000
Your email address	tarintoledo@gmail.com
Date of this report	February 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
Improved understanding of the biology of native CF tree species and their management potential in terms of CF restoration in the face of the predicted impacts of climate change.		X		The project was planned for a total of 3 years. The grant from RSG was used to develop the first phase, which focused on the production of plants for the establishment of enrichment plantations. We located adult trees of 12 species for seed collection. For these species, we evaluated germination and seedling growth rate under controlled conditions. This information contributes to the knowledge of native tree species for cloud forest (CF) restoration. Evaluation of species performance in the field sites will begin in May 2015 and will conclude in 2017.
Propagation of threatened tree species, thus contributing to their conservation.			X	We cultivated a total of 7231 seedlings belonging to 11 tree species. We have donated 2310 of these plants to another project focused on the recovery of native vegetation for wild bees in the same region. We plan to transplant 2700 tree seedlings in May 2015 in 9 CF sites.
Protocols for the germination and transplantation of selected CF tree species.			X	We completed the protocols for the propagation of 12 tree species. This information has been included in field guides (see information attached).
Increased awareness in the local communities regarding responsibility for CF biodiversity conservation and sustainable		X		We organised a total of eight puppet shows about the importance of CF, targeted to the younger members of the local communities. We plan to organise further activities in 2016 to strengthen local communities' capacities for the management of

Recommendations targeted to different stakeholders, local communities, technicians and federal programs, based on the findings, to support CF management and restoration.		X		We plan to complete the analysis of tree species performance along the altitudinal gradient in 2017. Based on the final results, we will produce the set of recommendations targeted to different stakeholders. The information regarding germination and seedling growth under shade house conditions will be used to support these recommendations.
Field guides to identify cloud forest tree species to facilitate future seed collection, participatory forest monitoring and ecotourism.			X	We have produced short descriptive summaries for the identification and propagation of 12 threatened tree species. (See complementary information). We plan to print these field guides in April 2015.

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

For various species, germination took a longer time than we expected; for some species, seeds are still germinating 11 months after sowing. Even though we succeeded in the germination of 13 species, we did not record the germination data from two of the species because, in error, these species were only sown in the nursery of one community. All of the other species were sown in both the community nursery and the nursery of the botanical garden of INECOL where we kept the replicates for evaluation of germination. We also lost all of the seedlings from one tree species, probably as a result of high temperatures at the INECOL nursery. We plan to collect new seeds during 2015 to repeat these germination trials.

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

- We produced more than 7000 seedlings of threatened cloud forest tree species that will be used in restoration initiatives.
- We established agreements with the owners of nine cloud forest sites for the establishment of enrichment plantations.
- We produced a field guide, with information about 12 cloud forest trees, which will be distributed in the watershed.

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

We organised a series of eight puppet shows in the communities of the sub-watershed of the River Pixquiac. While they were mainly targeted at the children of the communities, these events were also highly appreciated among the adults in attendance. We have been working with one member of the community in particular who has been supporting the work for the collection and processing of

seeds and the community nursery maintenance. We plan to present the progress and subsequent plans to the assembly of the San Pedro Buenavista ejido in April 2015.

5. Are there any plans to continue this work?

Thanks to the support from RSG, we have managed to develop the first phase of the project, originally planned for 3 years. In collaboration with other colleagues from INECOL, we have been awarded an important grant from the Mexican council of science and technology (CONACYT) for the next three years to continue this project and incorporate analysis of the impact of restoration efforts on above and below ground components along the altitudinal gradient. We have established an experiment to evaluate the growth of 10 CF tree species under two levels of irradiance (30% and 80% of shade) in controlled conditions, to be completed in October 2016. The ability to respond to changes in light availability is critical to plant success and could be used to determine the potential of tree species for CF restoration goals.

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

We have produced field guides to identify cloud forest tree species in order to facilitate future seed collection, participatory forest monitoring and ecotourism. We will distribute the guides among the communities for free in the next months. When we complete the analysis of tree performance along the altitudinal gradient, we plan to produce a set of recommendations based on the results targeted to different stakeholders (local communities, technicians and federal programs) to support CF management and restoration. We are producing a scientific paper about the germination and growth rates of the studied species under shade house conditions.

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 over a period of 12 months. We have been awarded another grant to continue the project for further 3 years. We originally planned to establish the enrichment plantations after 12 months but, due to the slow germination rate of some species and to coincide with the start of the rainy season, we now plan to carry out transplanting in May 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
Field technician salary	3,600	3,900	-300	The original sum was insufficient to cover the field technician´s salary.
Field assistant salary	960	1077	-117	The nursery required more work than originally planned.
Fuel	600	500	+100	Only the fuel used by the technician was funded from the grant.
Field guides printing	600	750	-150	The field guide design cost was not included originally and taxes for the printing service were not considered.

Bags, labels, markers, measuring tapes, plant press	240	45	+195	The botanical garden from INECOL provided most of the nursery bags.
Total	6,000	6,272	-272	I funded the difference from the discretionary budget that INECOL grants me annually

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

I have worked in partnership with the NGO SENDAS A.C. since 2009 and with the local communities in different projects and our relations have been respectful and with a clear commitment to improve the condition of CF and the communities inhabiting these areas. As a result, we now have good contacts among the members of these communities, and this ensures a safe environment in which to work. However, there are important risks in terms of deforestation for some of the sites due to the lack of certainty in the owner's plans for their land. It is therefore a central aim to coordinate various activities to increase capacities in the local communities for CF sustainable management. We plan to develop a proposal to obtain funding to support such activities in the following years. In the short term, we plan to present the progress in the project in the next annual meeting with the Watershed Council of the River Pixquiac (COCUPIX) in order to clearly inform all the communities of the activities that we will be carrying out as part of this project.

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 field guide will include the logo from The Rufford Foundation and the resulting scientific papers will include the RSG in the acknowledgements.