

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details

Your name	Luis Rolando Rivas Torrico
Project title	Conservation of the threatened reptiles and endemic in the Inter Andean dry valleys and highlands of Bolivia
RSG reference	13081-2
Reporting period	May 2013 to June 2014
Amount of grant	£6000
Your email address	rolo_yope@yahoo.com
Date of this report	September 2014

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 develop reptile assessments in the Inter Andean dry valleys and highlands of Bolivia			Yes	We developed 10 assessments of the reptilian fauna in the Inter Andean dry valleys and highlands to three departments of Bolivia (Cochabamba, Chuquisaca and Potosí), with a focus in endemic species and with some degree of threat. Data on distribution, abundance, habitat and natural history of these species, with the purpose of increasing the knowledge was obtained. In addition, we discovered a new record of a snake for Bolivia and a new species of lizard to science.
To train young biologists and students in reptile conservation work			Yes	We developed a training course on methodologies and reptile conservation in the village of Pojo, with 15 participants, all young students of biology, where also some authorities and residents of the municipality participated. In addition, we carried out educational workshops, conferences and presentations in different events, always focused on reptiles (emphasising the issue of beliefs, attitudes and use of the species) specifically in those endemic and threatened species.
To evaluate the knowledge attitudes and use of local communities surrounding reptile populations.			Yes	We collected data from local Quechua communities about knowledge and use that they give the different species of reptiles in the area of the valleys. One of the most conflictive subjects is the killing of snakes, due to beliefs, negative attitudes and instinctive fear of them; change these attitudes demanded dedication, time and effort.
To develop educational material and to carry out educational activities to try to change negative attitudes from local communities to the reptiles.			Yes	We produced and published material such as banners, brochures and field guides, material that was of great help during the development of the educational workshops. These documents show basic and specific

				information about each species, making clear the difference between lizards and snakes, endemic species and categories of threat, venomous and non-venomous, size and behaviour.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Due to the life cycle of reptiles and almost all organisms in the Inter Andean dry valleys, fieldwork was planned for the months of Spring, which coincide with the rainy season in these regions, where the reptiles are more active and the probability of observing them and find them is higher. The rains came to be one of the major unforeseen difficulties, since they were more intense comparing with the last years, which caused floods in several communities where we planned to carry out the field work. The rain destroyed large fields, landslides, roads and highways destroyed that made inaccessible the arrival to these communities, so we had to reschedule trips to these places.

In some communities that we visited, people did not wanted us in the surroundings, making it difficult for the field work and educational workshops, because of that in some cases we had to ask support of the teachers to develop the workshops with pupils of the schools and with little participation of the inhabitants of the communities.

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

Research

We did work in 10 locations in three departments (Cochabamba, Chuquisaca and Potosi) in the Inter Andean dry valleys of Bolivia, places with little or no study of fauna. This ecoregion has very interesting facts about its wildlife in especially for reptiles (20 species in total) and most of them endemic species (five species) and threatened (six species). The most important obtained data about the different species were population status, distribution, habitat, and natural history, which will be important for the subsequent assessments of the conservation status and its categorisation of these species. Also probably a new record of a snake (*Thamnodynastes* sp.) for the dry valleys of Bolivia and a new species of lizard to science (*Urosthophus* sp.), which was found in Torotoro National Park, the only protected area that is located in the Inter Andean dry valleys.

Education

We carried out a course about work and conservation of reptiles in the Inter Andean dry valleys, prioritising endemic and threatened species aimed to young students of biology, this course held in the village of Pojo. We also developed educational workshops on rural schools and some urban schools, also in events related to the environment and others, where we shared information about this group of reptiles, and specifically the importance of endemic and threatened species in the Inter Andean dry valleys. In these events, children are impressed with the diversity of reptiles in the area, even more with the snakes, where we took the opportunity to show them the differences between venomous and non-venomous. In addition we also took advantage to try to change the wrong beliefs and attitudes about reptiles, which are killed without any reason or based in wrong ideas.

We shared information about the species of reptiles in the area, the endemic species, threatened by their rarity and uniqueness; many of these facts were unknown to many people. We made efforts to

explain about their restricted distribution and also that their populations are being affected by various factors where people are involved, so that there is the need to protect them and to make efforts so that reptiles will not disappear.

We also created material to increase awareness, such as banners, brochures and photographic field guides, with relevant information about reptiles and also about the project and the results that we obtained; we also highlighted the most important species for conservation in the area. All this material has been very useful to increase awareness in people about the conservation of reptiles; we also are encouraging and guiding the children in local communities to make efforts on the protection and conservation of nature in general and specifically of threatened and endemic reptiles.

Conservation

We obtained data from five endemic species and six threatened species, in most of the cases with very few individuals observed, especially snakes, which are very hard to find. We got more records of the critically endangered lizard *Contomastix vittata*, endemic of the Bolivian Inter Andean dry valleys, with records in five locations including a national protected area.

Other important data that is worth mentioning is that we found probably a new species of lizard to science and a new record of snake to Bolivia; the first species found in the Torotoro National Park and the second in the village of Pasorapa. The Torotoro National Park is the only protected area located in the Inter Andean dry valleys that it holds and protects wildlife and native vegetation of these areas. By the importance of the fauna and the particular vegetation in the valleys there is a need to create new protected areas at the municipal, departmental and national levels, which safeguard the biodiversity of the area.

In this protected area we have been working together with park rangers and two Brazilian students, where we took the advantage to train these park rangers and students in the work with reptiles and were able to share knowledge with these students.

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

The work with local communities had two faces, in some of them the people were not so interested or they did not want us in the surroundings working with reptiles and in some cases was very difficult because they are very cautious with people from outside, in these cases we made use of our knowledge of the local language quechua that helped us a lot to get the confidence of the people, in some cases we started a good relationship just because of that. In some other localities people were interested from the beginning and in some cases they are now using our data for future to promote and implement biodiversity conservation projects, and prioritise the endemic and threatened species of the area, this is the case of Pojo and Pasorapa.

5. Are there any plans to continue this work?

On the understanding that the vast majority of the endemic species of the valleys also are with some degree of threat (critically endangered and mainly vulnerable), there is a need to continue with research efforts for a better understanding of their ecology, natural history, distribution, and status of their populations. Efforts must be increased in the case of snakes, since they are very difficult to find.

In this context we plan to focus our research and monitoring of endangered lizards, and specifically in *Contomastix vittata*, we intend to carry out a research on their ecology, natural history and monitoring of their populations in the town (Parotani and Capinota), Torotoro National Park and other locations already identified; where we plan to engage the people in the communities, municipal, departmental and national authorities, as also non-governmental organisations related to the conservation of biodiversity and environment.

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

For people in general we published material about reptiles in general and specifically threatened and endemic reptiles of the Inter Andean dry valleys (Banners, leaflets and field guides), which are being exhibited in the Museum and in some cases distributed among interested people.

The results of the project will be in scientific papers in national and international journals. It also shared in websites, blogs (reptilesbolivia.blogspot.com/) and social networks on the internet, reaching a wide range of people around the world. We have also been working in the dissemination of information of *Rhinocerothis jonathani* on the www.bothrops-theultimatepitviper.com/ page.

In addition, commemorating the international day of museums, we have been invited by the Museum of the University José Ballivián of the city of Trinidad to give a lecture about reptiles of Bolivia, importance and conservation, aimed at students of secondary.

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

We have rescheduled the timetable for research trips initially planned, due to the lifecycle of the reptiles for the months of spring, that allowed us to get better results, but the heavy rains during those months caused flooding, leaving many communities without access and making not possible to carry out our plans, which have further delayed trips to the field. We have tried to fix our new dates and also had to reschedule trips to the months where the conditions improved and works without any risk.

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
Data display	300	320	-20	Used more but covered by other sources
GPS	130	130	0	
Bags	10	5	5	The rest of the money was used for another component
Head torch	30	40	-10	Used more but covered by other sources
Tents	100	100	0	
Sleeping bags	20	20	0	
Backpacks	50	60	-10	Used more but covered by other sources

Dissection instruments	40	70	-30	Used more but covered by other sources
Laboratory material in Museum	70	70	0	
Chemicals	40	40	0	
Transport	750	700	50	The rest of the money was used for another component
Food	900	900	0	
Education in communities	400	400	0	
Tripticos for the educational workshops	300	300	0	
Guides for the educational workshops	400	400	0	
Office material	100	50	50	The rest of the money was used for another component
Subsistence payments*	2200	2200	0	
Accident insurance	60	110	-50	Used more but covered by other sources
First-aid kit	100	100	0	
TOTAL	6000			

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

We believe that the three components that we have considered during the development of the first and second Rufford (research, education and conservation), are important to a real contribution to the conservation of reptiles, is the only way to deal with the conservation of the fauna and flora in general in the urban and rural populations of Bolivia. We believe that they must continue to make efforts in these components not only by foundations and NGOs but involve communities, municipalities and other stakeholders who are involved with the conservation of the environment.

Another important step is the formation and training of biologists and young researchers, who continue to work for the conservation of reptiles in the Inter Andean dry valleys, supported by staff of the communities and parkrangers who receive training on the subject in the same way. This will allow continuity in all aspects, from financing, logistics, and personnel the project long term.

We intend to focus on the research of *Contomastix vittata*, lizard which is critically endangered according to the IUCN, this research must generate more information about the real situation of conservation of the species, since it has records from several locations and in some cases with abundant populations. At the same time there are plans to take advantage of important data of the reptile species sympatric with this lizard.

Monitoring populations of *Contomastix vittata* is a priority, using some telemetry, allowing us to know the dynamics of populations and range-at the individual level.

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?

If we use the logo RSGF in all submissions during the educational workshops, conferences and all kinds of material of diffusion, which were drafted on the basis of the project. We will also use in publications, reports and other documents generated with data from the project.

11. Any other comments?

Valleys are considered to be one of the most vulnerable ecoregions in Bolivia, added to this is the presence of many species with a high degree of endemism and threat, so it is necessary to combine efforts to save biodiversity, habitats and ecosystem of the Inter Andean dry valleys.