

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	Jane Herrera Uria
Project title	Conservation Status and Geographic Distribution of the Endemic Land Snails Species of the Isla de la Juventud, after Hurricane "Ike", in Cuba.
RSG reference	15700-1
Reporting period	July 2014 to August 2015
Amount of grant	£5000
Your email address	janehu@mnhnc.inf.cu
Date of this report	August 17 th , 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
To collect and preserve the Land snails species from Isla de la Juventud in the National Museum of Natural History of Cuba (MNHNC).			X	We collected and increased the scientific collections of molluscs at MNHNC. We achieved to carry out six expeditions in the year but in the two last field trips we collected just dead shells cause the vast drought.
To update the list, conservation status and geographic distribution of terrestrial molluscs.		X		We identify the great majority (85%) of terrestrial molluscs collected in samplings trips which three species were new localities. The rest of non-identified specimens will be studied in collaboration with other Cuban malacologist and the other parts of the world.
To report the presence and possible effects of invasive species.			X	
The elaboration of a database on the geographical distribution of the endemic species.			X	We made a database with information about the geographical distribution, habitat, threat, and natural history of several endemic species including their photographs.
To formulate proposals for the IUCN red list of the endemic species.			X	
Environmental education activities (talks and practical training) and materials (pamphlet and illustrate catalogue).			X	
To execute a temporary exhibits at MNHNC. (Subject: Molluscan diversity of Isla de la Juventud).		X		This temporary exhibit will be executed In September 2015 because that was the date chosen by the Museology department of MNHNC.

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

During the project we had a difficulty with our stereoscope because it was broken since January 2015. We couldn't fix this essential tool of work for the correct identification of any specimens. We resolve the problem because thanks to a colleague we used another one from other project. The other unforeseen difficulty was that we don't have all the access planned to the south part of Isla de la Juventud.

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

1- The improved knowledge on the conservation status and geographic distribution of terrestrial molluscs of the protected limestone mountains in Isla de la Juventud was our main outcome. Isla de la Juventud is one of the most important localities of endemism for Cuban Land snails and the studies in these areas were very scarce. We update the list of terrestrial molluscs by an inventory which will be publishing in a scientific journal shortly. Also, we could get several information about endemic specimens on their natural history (ecology, life cycle, conservation status, threat). Part of this information help us to complete the practical training and the informative cards.

2- The database on geographical distribution of the endemic species was completed. In general, the geographical distribution of land snail species of Isla de la Juventud was updated, for example we found new localities for *Priotrochatella* and *Liguus* (Herrera-Uria, 2015). This database also supplies valuable information to formulate proposals for the IUCN red list and for the park management policy. This outcome has an enormous significance for the conservation of endemic species.

- ✓ Herrera- Uria, J. (2015). New locality for *Liguus fasciatus* (Muller, 1774) from the Island of Youth, Cuba. *Tentacle*, 23: 15-16.
- ✓ Herrera- Uria, J. (2015). New locality for *Priotrochatella stellata* (Gastropoda: Helicinidae) from the Island of Youth, Cuba. *Tentacle*, 23: 20-21.
- ✓ Herrera- Uria, J. (2015). Land snails of Sierra de las Casas Protected Area (Island of Youth) and their conservation problems. *Tentacle*, 23: 23-24.

3- The reach of the environmental education activities was one of the most important achievements of this project. We dedicate several efforts to carry out all actions with success. We made talks in primary and secondary schools and rural communities. Many teachers of these schools were very grateful because they said that it was the first time their students received these kinds of activities. All talks were accompanied of practical materials as illustrate catalogue and informative cards. We developed a total of 99 activities in 12 schools and seven communities. Another important action, that wasn't planned, was carried out in the Museum of Natural History "Dr. Antonio Núñez Jiménez", Gerona. We identified and catalogued the malacological collection of this local institution. The collection contains 729 specimens encompassing eight families and 52 species. Also, the workers of the Museology

department received the practical training. In September 2015 we will execute a temporary exhibit at MNHNC, as extension of the improved knowledge on Land snails from Isla de la Juventud.

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

In this project were involved seven communities (Sierra de las Casas, Sierra de Caballos, and Chacón in Gerona, La Fé, La Siguanea, La Victoria, and La Demajagua) participating about 1 000 citizens (children and their families, teachers, farmers, and foresters). During talks with support of practical material (informative cards and illustrate catalogue) these communities learned what kind of organisms are terrestrial molluscs, their biodiversity, endemism, conservation problems, and importance to nature. As well, these communities learned about the value of the protected areas in the north part of the island. The main benefit of the local communities has been the increasing of awareness and knowledge referred to conservation of terrestrial molluscs. We dedicated special attention to isolated communities because one of the most important threats for land snails are human caused fires (Fig. 1). The terrestrial mollusc populations are very affected because they are organisms of low mobility and restricted distribution.

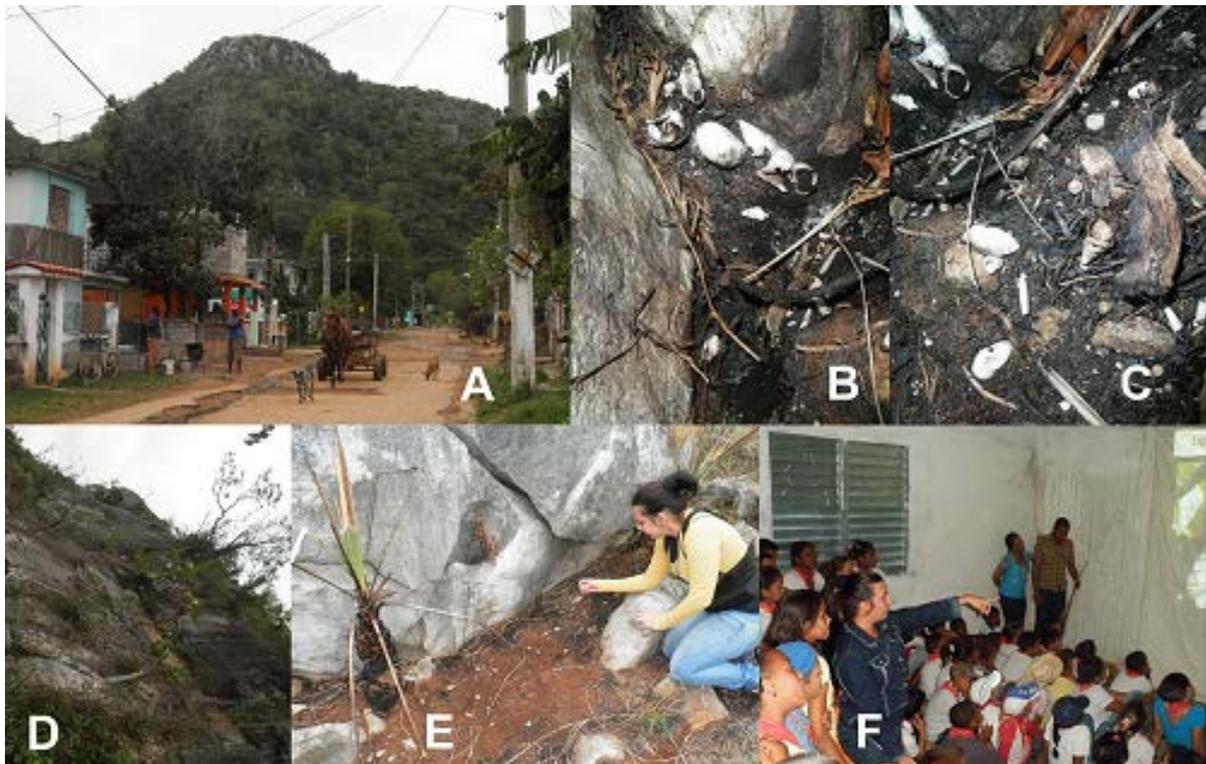


Fig. 1. Human caused fire near of Pueblo nuevo in the north part of Sierra de las Casas. (A): View of east hillside of Sierra de las Casas from Pueblo Nuevo. (B), (C) and (E): Dead shells cause recently fires. (D): Higher part of north zone of Sierra de las Casas. (F): Environmental Education Activities in the Camp of explorer pioneers of "Sierra de las Casas".

5. Are there any plans to continue this work?

Yes, there are more plans to continue this work. We plan to continue increasing this study as well as to carry out new conservation actions in long term. We will keep the objectives and we have new ones, with more emphasis in the environmental educational activities. The knowledge about the land snails of Isla de la Juventud is poor and scarce yet. Moreover, we are interested in to strengthen the relationship with the colleagues of the Museum of Natural History "Dr. Antonio Núñez Jiménez", Gerona. We are planning, for a near future, to open in that Museum a permanent exhibit about the land snails of Isla de la Juventud. We will continue researching the terrestrial malacofauna of Isla de la Juventud; if a 2nd Rufford Small Grant it is approved.

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

The results of this project will be exposed in national and international meetings next year. In September 2015, we will execute a temporary exhibit at MNHNC, showing the biodiversity of terrestrial molluscs of Isla de la Juventud. Three scientific notes were submitted to Tentacle last January (Herrera-Uria, 2015). At this moment, we are preparing two more articles (1-New species from southern of Isla de la Juventud; 2-Checklist of terrestrial molluscs from Sierra Bibijagua, Isla de la Juventud). Also, all these results of the project will be very useful for my PhD.

- Herrera- Uria, J. (2015). New locality for *Liguus fasciatus* (Muller, 1774) from the Island of Youth, Cuba. Tentacle, 23: 15-16.
- Herrera- Uria, J. (2015). New locality for *Priotrochatella stellata* (Gastropoda: Helicinidae from the Island of Youth, Cuba. Tentacle, 23: 20-21.
- Herrera- Uria, J. (2015). Land snails of Sierra de las Casas Protected Area (Island of Youth) and their conservation problems. Tentacle, 23: 23-24.

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 funds thanks to a Rufford Small Grant (15700-1) were used since July 2014 until August 2015 as was scheduled.

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
Transportation (Havana- IJ, 4 persons)	600	600	0	
Food supplies (200 days, 4 persons)	1400	1350	-50	Market price varied.
Fuel	300	300	0	
Batteries	110	100	-10	Market price varied.
Battery charger	40	40	0	
Tent	60	55	-5	Market price varied.
Printer	140	120	-20	Market price varied.
Printer toners	150	150	0	
Sheets	100	100	0	
Data-show	200	200	0	
Printing of informative cards of the species	600	600	0	
Professional Digital Camera	600	600	0	
Macro conversion lens	700	730	+30	Market price varied.
Total	£5000	£4945	£55	Exchange rate: 1.45

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

I feel that the important next steps for the conservation of Land snails are:

- To continue investigating the taxonomy, natural history, and geographic distribution of terrestrial molluscs.
- To continue the researches referred to life cycle of the terrestrial malacofauna and their applicability into conservation.
- Publishing the results in scientific journals.
- Presenting the results in different national and international meetings.
- To continue the increasing of activities related with training and environmental education activities, trying to involve a bigger number of local people.
- To apply for a 2nd Rufford Small Grant to widen the activities in Terrestrial Molluscs Conservation in all area of Isla de la Juventud.

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, The Rufford Foundation logo was used in the two materials (informative cards and illustrate catalogue) that this project produced. Also, the RSGF received much publicity during the course of my work because the logo was included in all talks and also in the acknowledgement of my three scientific notes for the journal Tentacle.

11. Any other comments?

I want to express my deep gratitude to Rufford Foundation for these supports because for me it was very significant in my career as conservationist and malacologist.