

## The Rufford Foundation Final Report

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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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Sofia Zalazar
<b>Project title</b>	The Bare-Faced Curassow ( <i>Crax fasciolata</i> ) as Flagship species: its study and conservation as strategy to protect the riparian forest habitat in Humid Chaco
<b>RSG reference</b>	19605
<b>Reporting period</b>	Final Report
<b>Amount of grant</b>	£5000
<b>Your email address</b>	<a href="mailto:sozalazar@gmail.com">sozalazar@gmail.com</a>
<b>Date of this report</b>	30 September 2017

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
Objective 1: To generate information on the spatial distribution of the last Argentinean populations of the bare-faced curassow and its threats, through the development of occupancy models.				Below
Objective 2: To know the local people's perception and use of this species and its habitat.				Below
Objective 3: To identify priority areas for its conservation.				Below

**Objective Comments:**

**Objective 1: To generate information on the spatial distribution of the last Argentinean populations of the bare-faced curassow and its threats, through the development of occupancy models:**

- Level of Achievement: Fully Achieved
- Comments:

We focused the research in the gallery forests of the Monte Lindo and Pilagá rivers in the province of Formosa, Argentina (Figure 1). We selected 48 sampling units (50 ha each), totaling 134 visits and 314.6 km traveled during fieldwork. In most cases, each site was visited three times (except seven sites that were visited once or twice due to the difficult accessibility). We recorded bare-faced curassow (BFC) presence in 22 sites (46%), three in Pilagá River and 19 in Monte Lindo River. We detected 89 individuals in 35 occasions (number of individuals detected per visit per sampling unit was 1 – 6, and 2.5 on average). We generated models of occupancy of BFC with covariates related to the habitat and threats. The models showed that occupancy of BFC along the gallery forests is strongly influenced by distance to nearest villages, and the presence of logging and hunting activities. Besides, occupancy is also affected to a lesser extent by availability of fruiting trees and water. These results reflected that current presence of BFC in the studied rivers is largely dependent of the absence of threats in the gallery forests.

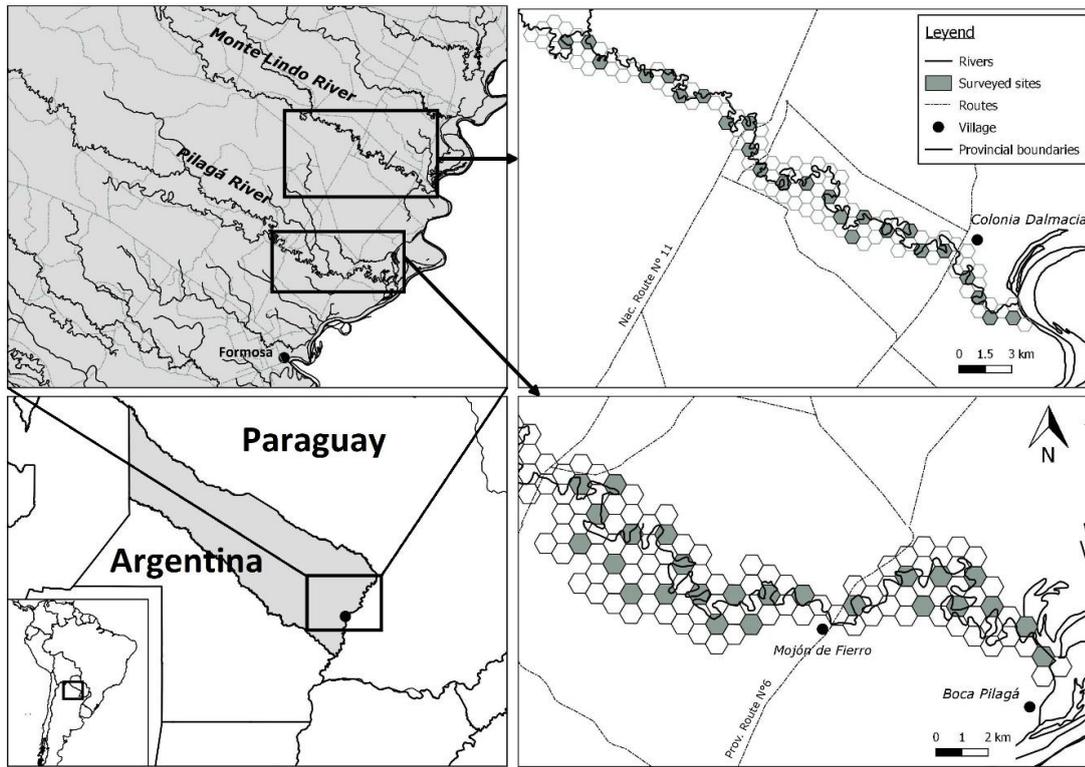


Figure 1: Map of study sites and 48 sampling units (dark hexagons) surveyed in the east of Formosa province, Argentina.



Figure 2: Fieldwork to determine the forest's use and spatial distribution of the Bare-faced Curassow in the Monte Lindo and Pilagá rivers.



Figure 3: Presence of hunters and wood extraction in the gallery forests of the Monte Lindo and Pilagá rivers.

**Objective 2: To know the local people's perception and use of this species and its habitat:**

- Level of Achievement: Partially Achieved
- Comments:

We conducted 30 surveys in two small villages in the eastern province of Formosa (Colonia Dalmacia and Mojón de Fierro). The surveys are focused to get socio-economical information of the local families, knowledge and perception about bare-faced curassow, and the uses of the forest resources. In addition, we carried out three workshops in the school of the Colonia Dalmacia, where we dealt with issues about gallery forest fauna and conservation.

During the period of time for conducting the surveys, the climatic conditions were very unfavourable. Because of a great rainfall the villages stayed isolated for 2 months delaying these activities. However, currently the villages are accessible and we are planning to conduct the remaining surveys and workshops during October 2017.



Figure 4: Workshops in the school of Colonia Dalmacia in the Monte Lindo River.



Figure 5: Upper: Meetings with local people and government authorities. Below: Public talks and scientific presentations.



Figure 6: Activities carried out in Colonia Dalmacia and Mojón de Fierro. Photos A-D: surveys to local people. Photos E-G: Mural made with the Acosta family and neighbors.

**Objective 3: To identify priority areas for its conservation.**

- Level of Achievement: Fully Achieved
- Comments:

As a result of the fieldwork along the rivers and the inferences of the occupancy model performed with the field data, we have identified two core areas in these two rivers that are regionally important for the conservation of the bare-faced curassow. Both areas belong to large private properties dedicated to livestock ranching. In these areas, we have observed that the threats are largely reduced and we confirmed that BFC are breeding there. Currently we are working with the owners to collaborate with the protection of the species in their properties.

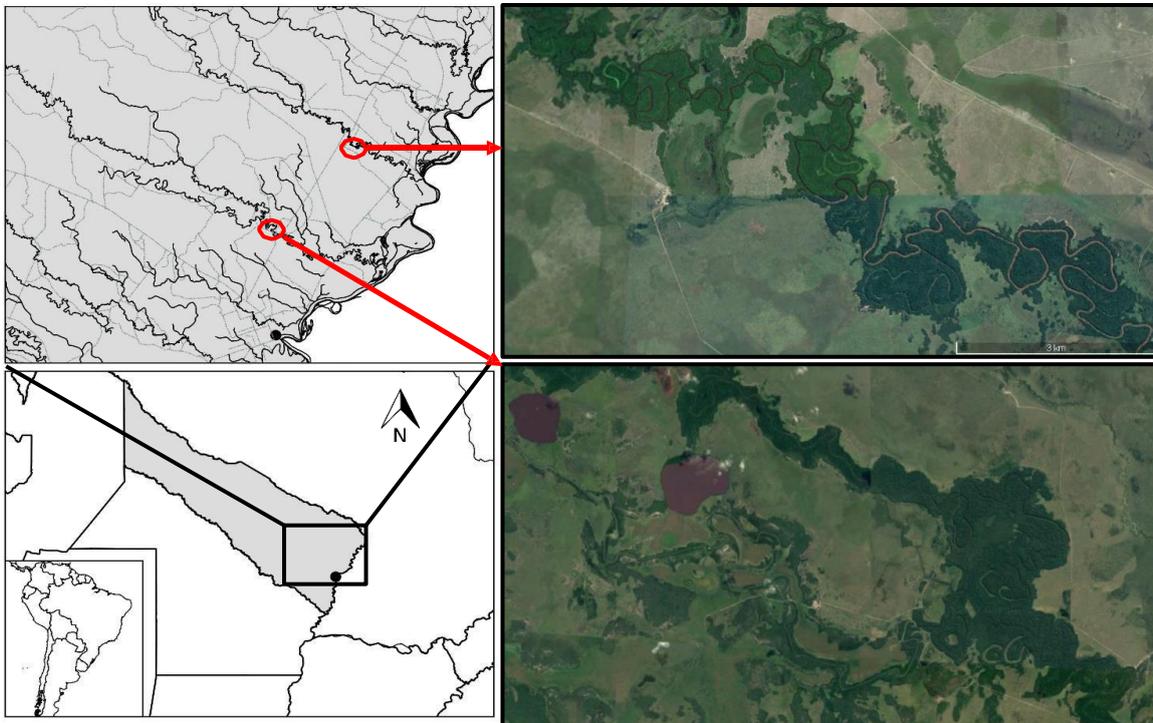


Figure 7: Location of the two areas identified as important areas for conservation of the bare-faced curassow.

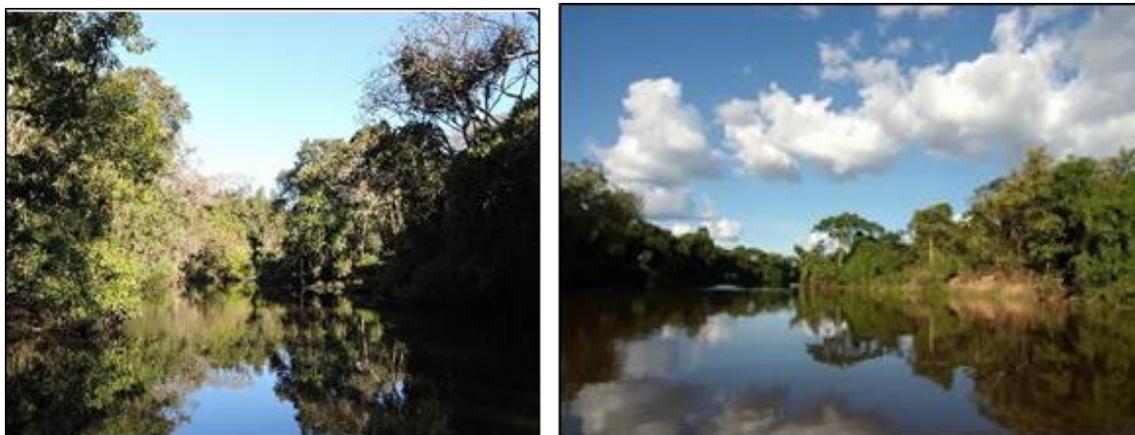


Figure 8: Gallery forests in the important areas for Bare-faced Curassow conservation.



Figure 9: Bare-faced Curassow nest found in an important area for the conservation of the species.



Figure 10: Bare-faced Curassow pairs with chicks found in an important area for the conservation of the species.

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

Our main difficulties were related to the access to field sites and villages, especially during adverse climatic conditions as mentioned before. Also, it required several reparations to the 4x4-truck and to travel in other media.

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

- 1- We detected the variables that influence the occupancy of the bare-faced curassow at the southern limit of their distributional range. Bare-faced curassow occupancy is seriously affected by wood extraction and hunting, and both threats can be estimated as a function of the distance to nearest village through the rivers. These results can be used for detecting important areas for BFC along other rivers in the North of Argentina.
- 2- The surveys and workshops with local people showed that currently the bare-faced curassow is a rare species close to villages, but it is still much appreciated as bush meat. Likewise, most local families use many resources of the gallery forest (such as timber, bush meat and honey) and they need to move farther away from their villages to get them. These facts are important to take into account for future conservation actions of the project.
- 3- We have detected two important areas for the conservation of the species, where we have seen that the species still reproduces. However, there is an urgent need to protect this site as there are many illegal hunters in the area and the understory is being degraded by livestock.
- 4- Additionally, we have promoted the creation of a "Commission for the conservation of Bare-faced Curassow in the province of Chaco" in which actively participate government and private organizations such as: Direction of Natural Resources, Administration of National Parks, Ecological Center of Saenz Peña, and CONICET researchers. During two workshops were created: an Action Plan for 2017-2020 and a Project for the experimental reintroduction of the bare-faced curassow in the Chaco National Park.

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

We studied through interviews how local communities are using bare-faced curassows and their habitat.

- -We carried out several activities with children in schools.
- -We trained a young as local guide for eco-tourists and birders visiting the area.

These activities allow us to involve local people in the project, and they have benefitted through knowledge exchange.

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

Yes, absolutely. In Argentina, bare-faced curassow current situation is very critical and there is much work to be done.

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

In August 2017, we attended the "Ornithological Congress of the Americas", where we shared the results of the project during an oral presentation. Also, we shared our project in a Birding Festival and we have been interviewed by local media.

Currently, we are finishing a scientific publication about the occupancy model of Bare-faced Curassow that will be submitted in December to an international journal.

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

All the Rufford Foundation grant was used during the fieldwork (October 2016-August 2017). The Timescale was modified due to climatic and access complications. However, we changed the order of the activities and we were able to fulfill all the objectives. Likewise, there were still more workshops and interviews, which are already planned for October.

**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 equipment (including camera traps, GPS, Piragua, projector, Recorder digital)	1837	2004	167	We sub estimated the cost of several field equipment.
Supplies	1140	980	-160	
Field expenses	1200	1250	50	With the floods, we went several times to the study site without being able to carry out the activities. That increased our fieldwork costs.

Gasoline and vehicle maintenance	823	1100	177	Because the pickup truck broke several times we had a higher maintenance expense.
<b>Total</b>	5000	5334	334	The CECOAL-CONICET has covered most part of this difference

The exchange used for budget is 1 Argentinean Peso = 0,048670 Pounds Sterling.

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

Our next steps are:

- To apply the results of the occupation model to detect new bare-faced curassow populations in others rivers from Formosa and Chaco and identify more important areas for conservation of BFC.
- To develop a campaign of "local pride" in communities that maintain BFC populations.
- To develop a pilot initiative in one local community to protect BFC promoting the birding/ecotourism in the river and training local bird guides.
- To evaluate a reintroductions and population reinforcement projects in Argentina.
- To expand the provincial initiative into a national initiative for the conservation of BFC.

**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?**

We used the RF logo in the leaflets, documents and in the public and academic presentations. We are planning to add them in the acknowledgements of scientific papers to be published (we are writing two manuscripts).

**11. Any other comments?**

I would like deeply thank Rufford Foundation. Without the grant, it would have been impossible to achieve these goals.

Although this was simply a first approximation, it opened many doors to work promoting the conservation of the bare-faced curassow of the gallery forests in Argentina. Many Thanks!