Final Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF 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 – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please DO NOT fill in and submit this form until the project has been completed.

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

Your Details	
Full Name	Melisa Docchio
Project Title	Assessing the contribution and importance of agroecosystems to the conservation of bat in Argentine Yungas forest
Application ID	*44345-1*
Date of this Report	20/10/2025

1. 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
1. To know the perception that the farmers have about the presence of bats in their farms.			X	We interviewed eight producers and 20 farm workers. In a future project, I will interview them again and compare their responses, as well as try to increase the number of interviewees. The perception of the producers was, for the most part, unexpectedly positive. Having grown up in rural areas, they are familiar with these animals and showed great interest in my research and a desire to learn and share what they learned. Only one producer showed no interest in these or other animals. Regarding the use of chemical inputs, most have some degree of agroecology on their farms and therefore try to use as little as possible or explore other options. The producer who was not interested in bats or other animals has a very intensive use of pesticides on his farm. We observed insects, such as fireflies, flying erratically and dying. This data is still being processed for publication in a journal in 2026.
2. Presence, diversity and activity of bats in farms.			X	We conducted sampling at six farms and recorded 17 species of bat.

3. To evaluate the insects availability that bats may consume			X	I used a large light trap that was left in place in the crops all night, as well as for the entire time the nets were open. I collected insects in a jar with alcohol and worked with an entomologist for their identification. We are currently submitting the analysis of these results on the nocturnal insect fauna of the farms to a journal. The analysis seeks to compare abundance and richness between farms with different agroecological management practices. We collected 567 individuals, belonging to 12 different taxa. The insects were identified to varying degrees: some species, genera, families, or orders. The most abundant and diverse order was Coleoptera.
4. To evaluate the variation of bats diets, I will analyze the feces obtained from the captured specimens on farms with different management. This will allow me to estimate the proportion of prejudicial insects consumed by bats and thus the ecosystem service they provide by regulating insect pests.		X		For financial reasons, I couldn't finish the lab work. The costs of supplies and labor for genetic analysis are high, and it's still in progress. I'm sending samples gradually as I can afford to pay. costs that increased: Field expenses (fuel, supplies) Volunteer expenses (food, transportation, medical coverage) Lab expenses (genetics) Workshop expenses (brochures for producers) While awaiting results from the lab, I analyzed 57 samples using a magnifying glass and microscope. The genera found varies depending on the farm and the animal from

				which the fecal sample was taken.
5. To analyze the relationship between the indices value and the data on bat diversity and abundance in each of the farms. I will compare the composition of bat communities in the field with the results of the indices, to estimate their accuracy.	X			Since I couldn't complete the previous objective, I couldn't make any progress on this objective yet.

2. Describe the three most important outcomes of your project.

a). Bats show variations in abundance and activity depending on agricultural management and resource availability. Echo Meter recordings during sampling to understand nighttime activity. Those farms with more agroecological management and greater availability of shelter had the highest rate of abundance and species richness.

b). During the three years of sampling carried out during the wet season, a total of 380 bats were captured (in addition to 40 frugivorous individuals that escaped or were released unprocessed). Of these 380, 178 are insectivorous species of interest to the thesis. The remaining species belong to different trophic guilds, primarily frugivorous. Because we stored excessive data on frugivores and nectarivores, we designed a new line of research. Fecal samples were collected from 190 individuals for analysis. Currently, only 45 samples have been analyzed.

c). Once the fieldwork was completed, each producer and farm worker was given brochures with photos of the captured species and information about them so they could distribute them to colleagues and participate in workshops. This was possible thanks to the producers' acceptance, enthusiasm, and interest in my study. Later, a final technical report will be delivered to them along with workshops. I believe it is important to establish ties with producers and foster interest in studying the ecology of their farms through a more participatory approach. I invite them to sampling sessions, workshops, and conferences, making them feel they are a fundamental part of this work. As a result, several of them asked me to continue inviting students and researchers to their farms to further study different components of agroecology. This study aims to propose agroecosystem design and management measures to promote the conservation of this group.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

There was a significant increase in fuel and food prices for fieldwork, so the money that was supposed to be used for laboratory genetic analysis was used to complete the work.

4. Describe the involvement of local communities and how they have benefitted from the project.

In the third objective achieved, I wrote about the active participation of farm producers in the project. Organizing workshops together and involving them in the project is of utmost importance to generate commitment to agroecology and enthusiasm for this paradigm. In addition to distributing brochures, leaflets, training sessions, etc., a group of university volunteers was trained and joined the project, completing their field hours.

5. Are there any plans to continue this work?

Yes. On the one hand, I still need to complete the laboratory analysis objectives and indicators. In addition, very interesting data emerged from the fieldwork, revealing a great diversity of species from other trophic guilds, such as frugivores and nectarivores. The latter was particularly remarkable, as this group is not usually abundant in Argentina. Nevertheless, we were able to collect data and identify nectarivore refuges. It would be interesting to analyze the diet of these other trophic guilds observed in the field.

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

I'm currently working on two papers related to the goals I've achieved. One with a more biological focus and the other with a more agronomic focus. Additionally, in November I will present a scientific 2 poster at the Fourth Argentine Congress of Agroecology, which has already been approved. We will soon be visiting schools to give workshops.

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

Complete the remaining objectives to complete the project and finish my doctorate in the future. Open new lines of research with data gathered in the field, together with students close to graduating from university, such as a thesis project or volunteer program.
Continue relationships with producers for future projects in private areas. We will soon be visiting schools to give workshops.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, in the 2 poster that will be presented at the Argentine Congress of Agroecology and in the brochures distributed at training sessions.

9. Provide a full list of all the members of your team and their role in the project.

Santiago Sarandon: Scholarship and thesis director. Agricultural Engineer, National University of La Plata (UNLP), Argentina. Full Professor of the Chair of Agroecology, Faculty of Agricultural and Forestry Sciences, UNLP. Researcher Teacher Category 1 (one). Director of the Laboratory for Research and Reflection in Agroecology (LIRA), UNLP. Principal Investigator of the Scientific Research Commission (CIC) of the Province of Buenos Aires
Marcos Vaira: thesis director. Research doctor of the National Scientific and Technical Research CouncilSan Salvador de Jujuy, Argentina Independent Researcher INECOA (UNJu - CONICET) Simple Adjunct Professor, Faculty of Agrarian Sciences – UNJu technical in environmental management. Graduate in education of Environmental Sciences: Universidad Tecnológica Nacional, San Francisco, Córdoba (UTN).
Ignacio ferro: National Council for Scientific and Technical Research - National University of Jujuy (CONICET - UNJu) Argentina. Collaboration with statistical analysis, sampling design with bats.
José H. Urquizo: PostDoc Position at National Scientific and Technical Research Council. Collaboration with statistical analysis, sampling design with bats.
INTA Yuto Staff: field work task
Farm owners and staff: field work task. Of the 6 farms, 5 showed interest in getting involved in the project.
Student volunteers: field work task. There were a total of seven volunteers. One of them, Belén Erazo, is currently working on her thesis with the farm producers at the National University of Jujuy.

10. Any other comments?

No.

ANNEX – Financial Report
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