

Final Evaluation Report

Your Details	
Full Name	Bruna Martins Bezerra
Project Title	Blonde capuchin research-conservation project: understanding conservation needs by creating an interface between research and society
Application ID	36634-D
Date of this Report	April 2024

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
<p>- Conduct Environmental Education Workshops: Conduct environmental education workshops in at least 4 public schools close to each study site. Duration: up to 8 months (including workshops preparations and deliveries). We aim to have at least 20 teachers attending the workshops in the schools.</p>			x	<p>We delivered the workshops to eight schools. We prepared course material with activities using low-cost materials for the teachers to explore the Sustainable Development Goals at school. After the workshops and with the feedback from the schoolteachers and students, we improved the course material, and it became a freely available e-book published by Editora UFPE. (link: https://editora.ufpe.br/books/catalog/book/847).</p> <p>We evaluated the impact of the workshops on the students through the inspection of drawings they made during the intervention. The evaluation of these drawings was the subject of the undergraduate final year project of the biologist André Felipe Carneiro dos Santos, who passed his viva in December 2023.</p> <p>In October 2023, during the Brazilian National Week for Science and Technology, we distributed the e-book as a memory stick in the schools with financial support from the <i>Fundação de Amparo à Ciência e Tecnologia do Estado de Pernambuco</i> (FACEPE) and Agro-industrial São José and Federal University of Pernambuco.</p>
<p>Acoustic Monitoring of the study population: Conduct passive acoustic</p>			x	<p>Passive acoustic monitoring has been conducted in both long-term sites in the Atlantic Forest (in Pernambuco and Paraíba), and we have started monitoring two populations in the Caatinga forest (in Alagoas). These acoustic monitoring are part of a PhD project (PhD student Bruna Teixeira) and an MSc Project (MSc student Juliana Lacerda). The</p>

monitoring of the study populations. Duration: 12 months;				studies follow the National Action Plan for the Conservation of Northeast Primates.
Camera trapping: Continuing camera trapping monitoring of the study population; Duration: 12 months;			x	Camera trapping has been conducted in both long-term sites in the Atlantic Forest (in Pernambuco and Paraíba), and we have started monitoring two populations in the Caatinga forest (in Alagoas). These camera trapping is part of an MSc project (MSc student Geovanna Lima). The study follows the National Action Plan for the Conservation of Northeast Primates.
- Semi-structured interview: Conduct semi-structured interviews on the local communities surrounding the study site; Duration: up to 06 months;			x	We conducted the interviews, and the analysis of the responses will be the subject of a new final-year biology undergrad project. Data from these interviews will be used in the planning of the third cycle of the National Action Plan for the Conservation of Northeast Primates in June 2024.
- Pilot visit to the blonde capuchins in the Caatinga biome: conduct a pilot visit to a Caatinga forest in the State of Alagoas to			x	We conducted the 2-week expedition and established a partnership with Instituto SOS Caatinga in Alagoas to carry on a long-term monitoring of two selected areas. The area has been protected since April 2023: RPPN Morro da Torre and RPPN SOS Caatinga. The projects of two MSc students have data from the sites focusing on blonde capuchins (MSc students Juliana Lacerda and Geovanna Lima). Through this collaboration and long-term plan, we also started investigating the small felines at the site,

<p>potentially establish a new field site in a biome, where the species has not been investigated. Duration: up to two weeks as we are trying to secure more funding for the visit.</p>				<p>since they have appeared in the camera traps initially set up for the blond capuchins. A new MSc student have started his project in March 2024 (MSc Student Rick Taynor), focusing on the small cats.</p>
---	--	--	--	---

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

Equipment delivery was delayed due to a material shortage (passive acoustic monitoring units). Nevertheless, field dates were adjusted, and fieldwork was successfully conducted. We also applied and obtained 4 additional months of scholarship from FACEPE for the MSc student Juliana Lacerda, who is responsible for acoustic monitoring. It guaranteed data collection successfully.

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

- We are building capacity and raising awareness for educators and students at local schools close to the forest fragments where we conduct our study. We also connected with local stakeholders at the different sites to promote the conservation of the blonde capuchins and their habitats.
- Training local human resources to work on biodiversity conservation in northeast Brazil – we trained students at undergraduate and postgraduate levels.
- We articulated with two Brazilian states to produce their conservation action plans for primates: i) Alagoas is now creating the Conservation Action Plan for blonde capuchins in the Caatinga scrub forest. The *Ministério Público de Alagoas* is responsible for the new Alagoas conservation plan; ii) Pernambuco is creating the Conservation Action Plan for Pernambuco Primates. The *Secretaria de Meio Ambiente Sustentabilidade e Fernando de Noronha* is responsible for the Pernambuco Plan.

4. What do you consider to be the most significant achievement of this work?

- Capacity building and awareness raising for educators and students at local schools close to the forest fragments where we conduct our study.
- The articulation to develop two state conservation action plans that will positively impact the populations of blond capuchins in the Atlantic Forest and the Caatinga.

5. Briefly describe the involvement of local communities and how they have benefited from the project.

-Involvement of the local NGO Instituto SOS Caatinga in Alagoas: We started the long-term monitoring of blonde capuchins in the Caatinga scrub forest of Alagoas, helping the NGO gain visibility in the area. We established an official cooperation agreement between the Federal University of Pernambuco and the NGO to ensure research and technical support at the new study site in Alagoas. The NGO also organised the Rufford Foundation learning event with us in April 2024. During the event, the NGO made new partnerships with local actors to help conserve the blond capuchin and instigate the creation of new protected areas.

-Capacity building at local schools: Schoolteachers received training on new low-cost activities to explore the Sustainable Development Goals at schools. Their input on the workshop materials was essential for creating an e-book, which they later received in a memory stick and is now used by several schoolteachers.

-Local students involved in the research obtained training in conservation biology and in using emerging technologies. Four students (one undergraduate, two MSc, and one PhD) benefited from this stage of the blonde capuchin project. Rufford funding supported the data collection of their study.

6. Are there any plans to continue this work?

- Yes. We hope to continue the long-term monitoring of the blonde capuchins in three sites (two in the Atlantic Forest and one in the Caatinga Forest). We hope to keep providing data to support transforming the Atlantic Forest sites into officially preserved areas such as the caatinga forest site. We also hope to continue the work in schools, assuring the local communities are involved in conserving the blonde capuchins and their habitats.

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

Outreach:

- As a product of our outreach activities, we have published the e-book "*Cartilha de Atividades para Abordagem dos Objetivos do Desenvolvimento Sustentável nas escolas*" (Activity Booklet to approach the Sustainable Development Goals in

schools). The e-book is available on the *Editora UFPE* website: <https://editora.ufpe.br/books/catalog/book/847>. The e-book is distributed to schoolteachers in outreach actions at schools.

- Data from our studies and outreach activities were used to incite the Conservation Action Plan for the Blonde Capuchin in the Caatinga forest of Alagoas State and the Conservation Action Plan for Pernambuco Primates.

Academic publications:

Data from this stage of the blonde capuchin project are part of one ongoing PhD project and two ongoing MSc projects. We expect at least three manuscripts related to these studies to be submitted to journals in 2024. Data from this stage of the blonde capuchin project was part of André Felipe Carneiro dos Santos's final year undergraduate monograph. A paper related to this monograph is currently under review in *Folia Primatologica*.

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

We used over 1,5 years instead of 12 months. The delay in equipment arrival required us to adjust the fieldwork period. Nevertheless, equipment acquired through the Rufford grant is used at the study sites to monitor the blonde capuchin in our long-term project. Thus, fieldwork is still ongoing. Also, we obtained additional funding to complement the activities we initiated at this stage of the blonde capuchin project funded by The Rufford Foundation. For instance, we obtained funding to publish an e-book initially created for the workshops predicted for this stage of the blonde capuchin project. The e-book was published in July 2023 by *Editora UFPE*. Later, we also obtained funding to distribute the e-book as a memory stick in schools and to conduct a new awareness-raising action in October 2023 during the Brazilian National Week for Science and Technology. We involved local artists in this action, valuing the local culture of puppet shows of the municipality of Igarassu-PE to combine science and art to pass on our conservation message. Local artist Mestre Antero Assis created a mascot for the project, the Maculego. Maculego is a puppet depicting a blonde capuchin monkey.

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

-Promote the creation of a protected area at Mataraca-PB: We sent a letter to the national environmental authority (IBAMA) to support the creation of the protected area in the Tronox mining site. The mining activity at the site has ended, but unfortunately, there is a plan to construct a port on the coast beside the blonde capuchin forest fragment. The fragment supports a large population of blonde capuchins we have been investigating since 2010. Also, since 2021, individuals of red-handed howler monkeys, *Alouatta belzebul*, have started to appear at the site.

We detected three individuals entering the area, probably dispersing from the Pituba forest fragment beside the Tronox mining area. Thus, the study site has now two primate species currently categorised as threatened according to the IUCN list; one is Endangered, and the other is Vulnerable.

-Promote the creation of a protected area at Igarassu-PE: The Mata dos Macacos is a private area but not officially a protected site.

-Expand studies of blonde capuchins in the Caatinga biome: We need to understand the conservation needs of blonde capuchins in the Caatinga forest since most studies have been conducted in the Atlantic Forest.

- Continue capacity building at schools: To preserve blonde capuchin populations, it is essential to reach out to educators and schoolchildren near fragments where the occurrence of blonde capuchins is confirmed since they will help us to reach the older generation of locals.

-Connect with local stakeholders: Only local stakeholders and decision-makers will effectively help the development and execution of effective conservation strategies, such as the building and implementation of local conservation action plans.

10. 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?

Since 2010, the blonde capuchin Project has used the Rufford Foundation Logo in all its materials, including capacity-building workshop materials, banners in local communities and conferences, the e-book, our Instagram profile, and dissertation presentations.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Team member	Role
Bruna Bezerra, PhD	Project coordinator
Karolina Medeiros, MSc	Outreach and environmental education activities
Anielise Campelo, MSc	Outreach and environmental education activities
Barbara Moraes, Ph.D.	Research team (mapping and distribution) and outreach activities
Ana Matte, Ph.D.	Research team (mapping) and outreach activities
Robério Freire-Filho, Ph.D.	Research team (behavioural ecology)

	collaboration)
João Pedro Souza Alves, Ph.D.	Research team (behavioural ecology collaboration)
Bruna Teixeira, MSc	Research team (acoustic ecology)
Juliana Lacerda, BSc.	Research team (acoustic monitoring and interviews)
Geovanna Lima, BSc	Research team (camera trapping, behaviour)
Rick Taynor, veterinary	Research team and veterinary of the project
André Santos, BSc	Outreach and environmental education activities and research (analysis of drawings from outreach activities)
Undergrad Raphaella Ferreira	Outreach activities (expositions at schools and social media)
Undergrad Paulo Campelo	Research team (acoustic monitoring) and outreach activities (expositions at schools).
Undergrad Ester Marques	Research team (camera trapping) and outreach activities (expositions at schools).

12. Any other comments?

I have no words to thank The Rufford Foundation for supporting the blonde capuchin project and my laboratory at the Federal University of Pernambuco. I owe part of my career as an academic professor and conservationist to The Rufford Foundation. The Rufford Foundation support was crucial for my PhD, postdoc and laboratory projects. My postdoc project funded by The Rufford Foundation empowered me as an early career woman in conservation and a young mother at the time. I was pregnant when I received my second Rufford grant to start the blonde capuchin project in Brazil. It inspired me to inspire other young ladies and mums to continue their research projects and careers along with having children. I now have two kids, and the blonde capuchin project is ongoing at three sites.

The Rufford Foundation was crucial for maintaining the research in my laboratory over the years. Several local students benefited directly and indirectly from the support from The Rufford Foundation in my lab. Nowadays, I have my own laboratory at the Federal University of Pernambuco, the Laboratory of Ecology Behaviour and Conservation. In our lab, we develop studies on several vertebrates, including primates, parrots, felines, and marine mammals, to gather data for their conservation. To promote women and other minorities in science in our lab, we have a small space for kids so that our postgraduate students can bring their kids when needed. The lab has a diverse group of students, including mums, blacks, whites, and LGBTQ+ students. We created a support community to ensure inclusion and diversity in our lab.

I would like to thank Jane Raymond and Josh Cole for their support since my first Rufford Grant in 2007 when I was a PhD Student at Bristol University. I also want to thank Mariam Weston and Stuart Paterson, with whom I had more contact last year, because we organised the First Rufford Foundation Learning Event in Brazil. I learned so much from Stuart's experience and vision of effective conservation and Mariam's conservation planning strategies and organisation. Their willingness to help and determination was inspiring.