Final Evaluation Report

Your Details	
Full Name	Priscilla Braga Petrazzini
Project Title	Population Viability Analysis and Conservation of Giant Anteater in a Savanna Protection Area
Application ID	28256-1
Date of this Report	16/08/2023

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
Estimate the structure and population viability of giant anteaters in protected areas.				
Identify the anthropic factors that influence the behaviour of the giant anteater in the park				
Estimate the habitat use of giant anteaters in protected areas.				Due to the pandemic and the economic crisis, it was unfeasible to import radio transmitters. For this reason, we decided to obtain this habitat use data only with a trap camera, intensifying our field efforts.

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

a). The giant anteater occurs throughout the entire length of the conservation unit, showing the importance of environmental heterogeneity for the species. However, we observed that the landscape matrix is one of the main factors for habitat use for the species. We observed that proximity to agricultural areas negatively influences the occurrence of the species.

b). We found evidence of the influence of human activity on the behaviour of the giant anteater. We found a higher frequency of activity during the night in places close to agricultural areas in both seasons, being statistically significant only in the rainy season. In the dry season, the distance from the water had a negative effect, that is, the closer to the water, the greater the probability of activity during the day. The level of plasticity of the giant anteater in altered habitats is still not well understood. This study contributes to filling this gap, opening up the discussion of the importance of seasonality in modulating the behaviours of the species, the need for preserved areas, and how human activities can interfere. Our research is an important case study for the future of other conservation units, in which the trend is the increase of agriculture and urban centres in their vicinity.

c). Due to the intense sampling effort, it was possible to record a jaguar (*Panthera onca*) inside the park. This is essential data because it is the first photograph of this species from the original part of the PNB.

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

During the execution of the project, some unforeseen events occurred. The first and most impactful of all was the COVID-19 pandemic:

- The Brazilian economic crisis made the importation of equipment very expensive, and for this reason, the monitoring stage with GPS/VHF collar had to be cancelled. As the stage became unfeasible, the money was reallocated to compare more camera traps.
- Due to the lockdown, the park closed, and the execution of field activities was delayed. In addition, the university has cancelled the supply of vehicles for fieldwork, and I have to manage the budget for car rental and gas.
- Unfortunately, during the three years of the project, we had some equipment lost inside the park due to theft, and due to a huge arson in the study area.

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

The park is used by the population for activities such as hiking, trails, and swimming. The local community appreciates this contact with nature and the opportunities to encounter wildlife. However, our work highlights how the survival of these species is jeopardised by human activities. By identifying these issues, conservation efforts can be implemented to ensure the efficacy of safeguarding the protected area. In other words, these species will thrive in a healthy environment, ensuring the sustainability of the wildlife and, consequently, creating a secure space for human enjoyment with an increased likelihood of encountering these species.

The presented data have also contributed to discussions regarding the opening of new visitor trails within the park. Additionally, they have informed the discourse on strategies for managing invasive species and monitoring the presence of hunters. All the data have been of significant importance for the conservation unit's managers to formulate essential strategies for internal actions and interactions with the surrounding residents.

5. Are there any plans to continue this work?

No, the objective proposed during this study has been concluded. There are intentions to conduct additional surveys within the park in the future; however, there is currently no funding available for these endeavours.

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

I am preparing scientific articles with the research results for the dissemination of results to the scientific community. However, the results will be presented to local park managers, and other environmental entities, to assist in reserve management actions.

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

Looking forward, there are several crucial steps to consider:

1. Continued Fauna Monitoring: It remains imperative to sustain the monitoring of the fauna within the study area. This should encompass the adoption of alternative methodologies that target other vulnerable species, such as the giant armadillo.

2. Environmental Education Initiatives: Undertaking actions in environmental education holds significant importance to mitigate anthropogenic impacts. Raising awareness among park visitors and the local community is essential, ensuring they comprehend the far-reaching consequences of invasions and the presence of domestic dogs on wildlife behaviour and spatial utilisation.

3. Implementing Solutions: The identification of primary anthropic and local impacts through our project signifies a crucial step. The urgency lies in translating this knowledge into tangible actions. It is imperative that measures are taken to address and alleviate these impacts effectively.

As we move forward, the continued dedication to monitoring, education, and actionable interventions is paramount to safeguarding the delicate balance of the ecosystem and ensuring a sustainable future for both wildlife and human interaction within the area.

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?

Preliminary results were presented during the Brazilian Congress of Mastozoology. The logo was current during the presentation, and references to Rufford have been included in articles that have been prepared or are presently being developed. Further presentations are planned for this year, where I will feature the foundation's logo in any visual materials used during the lectures. By the end of the year, I have the thesis defence and a presentation on the project's outcomes scheduled for Brasilia National Park's staff members.

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

Priscilla Braga Petrazzini - Project head

Prof. Dr. Ludmilla Moura de Souza Aguiar - Project supervisor

FINATEC- Funds management

Giulia Ramos da Silva - Field assistant and project member
Ana Beatriz Nascimento e Silva - Field assistant and project member

Millena Castro Ribeiro - Field assistant and project member

Igor Daniel Bueno Rocha - Field assistant

Ugo Mendes Diniz - Field assistant

Carla Grasiele Zanin Hegel - Field assistant

10. Any other comments?

- We report a new record of a jaguar in Brasilia National Park that was photographed while monitoring the giant anteater (*Myrmecophaga tridactyla* Linnaeus, 1758) population using camera traps. This jaguar record is critical in documenting the presence of this species in highly human-inhabited and urbanised areas. Our new record also contributes to the understanding of the current distribution of remaining individuals and confirms the importance of large-scale protected areas in providing habitat for species, such as jaguars, which have large ranges. - https://doi.org/10.15560/18.3.463318

- Other papers are in the process of elaboration and submission. As soon as they are publishers we will forward and update everyone.

- During the field data throughout the research process, it was possible to observe the issue of the presence of domestic dogs within the area. We analysed the usage and activity patterns of these dogs. These findings were a part of the research conducted by an undergraduate student under my co-supervision. They were presented at CBMZ and are currently being prepared for publication. However, we have also identified that this invader could potentially pose a significant threat to the anteater population, as evidenced by an encounter captured in a camera-trap recording. Given this issue, our current objective is to collaborate with local residents (tutors) to facilitate the neutering and vaccination of these animals. Furthermore, we aim to raise awareness among the residents in order to prevent these animals from entering the area.

- All equipment purchased will contribute immensely to future laboratory projects. Our study group intends to continue monitoring the mammals (especially the xenarthrans) at the UCS. We intend to monitor the use of giant armadillo dens at the UC in 2024.