Final Evaluation Report

Your Details	
Full Name	Paulo Ricardo Siqueira
Project Title	Synergisms and changes in bird ecological functions in an endangered tropical forest
Application ID	31129-1
Date of this Report	10/14/2022

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
Evaluate how the amount of forest cover determines richness and composition patterns of forest-dependent and habitat-generalist bird species.			■	The objective was achieved. The results have already been analysed. The manuscript is in the writing process.
investigate the synergisms of ecological functions (insect predation and frugivory) and also changes in the diversity of ecological functions provided by birds in a threatened tropical rainforest			■	The objective was achieved. The results have already been analysed. The manuscript is in the writing process.

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

a). Decreasing forest cover reduced the richness of forest-dependent species and increased the richness of habitat-generalist birds. However, the gain of habitat generalists did not compensate for the loss of forest-dependents birds. For example, a 10% decrease in forest cover led to the loss of four forest-dependents and the gain of only two habitat generalists.

b). We also found that 30 species showed thresholds, in which 18 reduction of distribution in landscapes with a low 30% of forest cover. Furthermore, this method can be an interesting method for identifying bioindicator species, contributing to the identification and reduction of impacts on the whole community.

c). We found that the different functions show different responses to forest cover. Insect predation did not show significant differences in relation to the forest cover gradient. On the other hand, frugivory was changed by forest cover.

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

I have changed lot of sampling points for cause to the Covid-19 pandemic. Thus, the schedule was delayed. In addition, several hotels and restaurants also closed with the pandemic, which prevented from travelling to the sampling point.

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

My project can help develop of local tourism through birdwatching. In the study area, we observed more than 130 species of birds, with several endemic species. Therefore, an interesting area for birdwatching activity. This activity can increase the family income of the local population and contribute to the strategies of conservation.

In this project, I also proposed to show the results to the local community through short talks for students at the local schools. I conducted short talks for students of the local community. I showed them the importance of forest and birds' preservation for the maintenance of ecosystem services.

5. Are there any plans to continue this work?

Yes, I intend to continue this work. The study has not yet been finished. My objective for the next study is evaluated the influence of forest cover in the network of bird seed-dispersal interaction.

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

The study will be shared through scientific papers, but precisely three papers, two of which is already in the final phase of writing. In addition, I will make educational videos that will be showed in short talks for students in the region, and on my social media. My main objective is to reinforce the importance of birds for maintenance of ecosystem services.

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

I believe that the important step is to disseminate the results, both scientific and local community. For example, in landscapes with low forest cover (less than 30%), we found that major dispersers from the Atlantic Rainforest, like *Pyroderus scutatus* and *Penelope obscura*, were excluded. For scientific communities, the result is important because informed that in low forest cover these species don't maintain to viable population. To local communities, this species is very important in maintaining the local forest, which provides an important ecosystem service. Therefore, these results are important to make conservations measures more effective.

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?

I have not yet produced materials and publicity in my study. Nevertheless, I submitted one abstract for ATBC congress (58th Annual Meeting of the Association for Tropical Biology and Conservation).

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

Frederico de Siqueira Neves - Implementation of this project.

Andrea Larissa Boesing - Implementation of this project.

Pedro Giovani da Silva - Implementation of this project and statistical analyses support.

10. Any other comments?

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