

Final Evaluation Report

Your Details	
Full Name	Gudryan Baronio
Project Title	Plant reproduction on different fire regimes: how it is maintained by different ecosystem services?
Application ID	37557-2
Date of this Report	29th July 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
Understand how pollination ecosystem services are altered according to the effects of fire, the dependence on pollinators will be evaluated by isolating flowers from ant activity				
Evaluation of the effects of fire and ants on the soil seed bank: composition and germinability				Evaluation was done, however due to severity of climatic condition during a storm our experiments in greenhouse was unfeasible.

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

a). We estimated the pollen amount that was removed from and deposited on flowers of two important species of Eriocaulaceae. These results help us to understand the importance of pollinators to plant reproduction.

b). We estimated the effect of ants on pollen removal and deposition, showing these insects are really important according to different roles on insect-plant interactions.

c). We have recorded several ant species which visit Eriocaulaceae flowers, some of them can be considered both pollinator and seed disperser of those plants.

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

Our biggest difficulties were related to access to the study site, which is about 70 km from the nearest city, but more than 1000 km from the university. We had support from park staff who assisted us with transport and installation on site in all field campaigns.

Furthermore, due to a strong storm we had our germination experiment of the seed bank dispersed by ants completely destroyed. This occurred due to the rupture of the canvas covering the university's greenhouse, unfortunately there is nothing to be done other than restarting the experiment, what we want to start as soon as possible to obtain conditions to sampling again.



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

Local communities are totally involved with fire regime management in Sempre Vivas National Park. A lot of them annually work as firefighters in park staff, and consequently helped us to set up and organise the fire experiment. Furthermore, human communities use fire to manage flower blooming of everlasting flowers. However, there is a widely fire regime approach in communities, and two of more common are being studied here. It was very interesting to see the firefighters' views about the work. They showed an interesting comprehension about the importance of understand how fire affect ecological communities.

5. Are there any plans to continue this work?

Yes, we plan to develop a new part of the project, deeper and directly involved with the community. We noticed that some people who collect evergreen flowers inside the park are interested in planting these flowers in beds specially organised by themselves. In this way, we could test under different conditions the effect of management on the reproductive success of the species.

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

The project will be partially divulgated on next semester on event of Universidade de São Paulo with the main results of all researchers of university. Furthermore, we have made results available to park staff, which will use the results to plan fire management.

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

Now I will focus on results dissemination according to manuscripts writing and presentation they to park staff in order to disseminate the results of this project in scientific community. Certainly, it also should be divulgated in local human communities, which are strongly related to fire use. From the previous results divulgation we understood the local communities are really interested on Eriocaulaceae conservation. I intend to study these points on next years and plan to required one more Rufford Grant.

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 used the logo during the presentation of the preliminary results (PowerPoint presentation) of this project in the Brazilian Pollination Symposium that will occurs in Garanhuns (Brazil) October 2022.

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

Vânia Regina Pivello, Ph.D in Ecology. She studies fire effects in Brazilian Cerrado and now is coordinating a major project to understand how different fire regimes



conduce ecological effects on Rupestrian Fields. She worked on project development and helped with logistics.

Paula Leão, biologist. She is the head on National Park of Sempre vivas and helped with logistics and data collection.

10. Any other comments?

I am very thankful to The Rufford Foundation for financial support for this project. I feel very happy to develop this 2nd project with The Rufford Foundation support. Below again follows a set of pictures taken during fieldwork in Sempre Vivas National Park.

























