

Plan Overview

A Data Management Plan created using DMPTool

DMP ID: <https://doi.org/10.48321/D1965Q>

Title: Exploring phenological patterns in monoecious fig trees: unraveling the role of ecological and biological traits on the fig – fig wasp mutualism

Creator: Rodrigo Pereira - **ORCID:** [0000-0002-7736-4211](https://orcid.org/0000-0002-7736-4211)

Affiliation: Universidade de São Paulo (www5.usp.br)

Data Manager: Monise Terra Cerezini, Paulo Roberto Furini

Contributor: Monise Terra Cerezini, Paulo Roberto Furini

Funder: São Paulo Research Foundation (fapesp.br)

Funding opportunity number: 2006/03733-5

Template: USP Template - Minimum

Project abstract:

Understanding the ecological and evolutionary aspects of mutualistic interactions is essential for predicting the responses of species to environmental changes. This study aimed to investigate the phenological patterns and reproductive strategies in two closely related fig tree species, *Ficus citrifolia* and *Ficus eximia*. We conducted weekly monitoring of 99 *F. citrifolia* and 21 *F. eximia* trees from January 2006 to April 2011 in an area close to the southern edge of the tropical region in Brazil. Our results revealed contrasting phenological patterns between the two species, with *F. citrifolia* displaying an annual flowering pattern (1.4 episodes per tree year⁻¹) and *F. eximia* a supra-annual pattern (0.5 episodes per tree year⁻¹). We also found significant differences in reproductive strategies, with *F. eximia* producing more pistillate flowers, and consequently more seeds and pollinating wasps per fig than *F. citrifolia*, likely as an adaptation to overcome

limitations of low population density, by maximizing the gene flow. The fig wasp, as the shorter-lived organism, was found to influence key processes associated with the success and stability of the mutualism, such as fig development and ripening. Our findings emphasize the importance of understanding the intricate interactions between mutualistic partners, and their adaptive responses to environmental conditions in shaping the reproductive strategies and genetic structure of fig tree populations.

Start date: 01-01-2019

End date: 08-01-2023

Last modified: 09-14-2023

Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customize it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

Exploring phenological patterns in monoecious fig trees: unraveling the role of ecological and biological traits on the fig – fig wasp mutualism - Description of Data and Metadata produced by the project

Data Creation and Collection

What data will be collected or created?

Phenological data from *Ficus citrifolia* individuals were collected on the USP campus in Ribeirão Preto city.

How data will be collected or created

Data collection will take place from trees growing naturally in urban area.
