

Start-end date: 22.08.2022	  UFOP Universidade Federal de Ouro Preto	
Student name: 11.01.2023		
Course in the Netherlands: <b>Environmental Science</b>		
Internship Department/Company: <b>UFOP</b>		
Brazilian Professor/Supervisor: <b>Professor Yasmine Antonini</b>		
Dutch Professor/Supervisor: <b>Jappe de Best</b>		
Internship		

### Problem/assignment

The project is going over several years, so I was only working on part of the project.

The goal of this part of the research project is to determine if protected areas in a Brazilian state park show higher biodiversity (in plants and pollinators) by comparing data gathered within the areas. The same should be done for wet (peatlands) and dry areas. Interactions should be attempted to be understood by recording the functional traits of plants and pollinators and by constructing an interactive network.

At the end of the project, plant-pollinator interactions should be predicted by constructing an interactive network.

### Used methods/project phases

#### 1. Fieldwork

→during fieldwork, insects are collected and killed in ethyl acetate. Protected and unprotected areas were divided into wet and dry areas to compare

#### 2. Pinning of insects

→the insects are taken to the laboratory and pinned according to pinning protocols

#### 3. Classification of insects

→insects are identified, looked at under the microscope, and classified according to their functional traits (body size, length of tongue, mode of pollen collection)

#### 4. Data analysis

→the collected data is analysed to determine if protected or unprotected and wet or dry areas show more abundance and richness of pollinators and richness of plants. Besides, functional diversity and similarities in time were compared (within the different areas)

### Results

The protected areas show more abundance and richness of pollinators (36% higher than in unprotected areas). There are significant differences in insect abundance and richness between the dry and wet areas, meaning that peatlands with higher counts of individuals are indeed more biodiverse than dry areas. The functional diversity in pollinator and plant traits is generally higher in the protected wet areas. A comparison between community composition during the different samplings shows that areas are mostly sharing the present plant and pollinator species in space and time, showing similar blooming times throughout parts of the year.

**Extra info/advice/link to final document and presentation**

[ICNF - Instituto da Conservação da Natureza e das Florestas Cerrado | Places | WWF \(worldwildlife.org\)](#)  
[About \(fairr.org\)](#)