Ref.: Mirella Baldacconi Gondeck 40781-1

1st RUFFORD FOUNDATION SMALL GRANT – Report II

The project accomplished fifteen weeks of field work, corresponding to 90 days and completing the five campaigns as initially planned. We had a drier than expected summer followed by an autumn with temperatures above the average for most of the time, which allowed us to be in the field until May 28th.

During the month of June all species were identified and collected specimens were numbered so that data could be organised into a database. All specimens registered in the field were photographed and 240 were collected and will later be set and incorporated into the University's entomological collection. A total of 642 butterflies belonging to 45 species were recorded in the traps (TABLE 1). Within these, nine species are still to be identified and all other will be confirmed by specialists. We had the occurrence of seven species not known to be frugivorous (Ithomini and Victorini tribes), counting them for the study anyway.

We had the participation of sixteen people in total, including field assistants, researchers, undergraduate students, technicians and general public (TABLE 2). One of the students was so interested in the research that she decided to work with fruit-feeding butterflies for her final undergraduate project thesis, inviting me to be her supervisor. For now, she has already done three sampling campaigns of three days each at the Córrego Grande Municipal Park. Also, one of the volunteer researcher accompany the fieldtrips using a butterfly net and was able to record another forty nectarivorous butterfly species. He is now applying for a postdoc vacancy at our laboratory and will be also surveying fruit-feeding butterflies at the Rio Vermelho State Park, area not covered in the present study.

Four specimens of *Colobura dirce* (Nymphalinae: Coeini) and three of *Caligo brasiliensis* (Satyrinae: Brassolini) were collected, donated and maintained alive for the "Córrego Grande Municipal Park Insect Diversity" environmental education and conservation project. Visitors in the park could learn and follow the *Caligo brasiliensis*' life cycle, since the butterfly has laid eggs that have already hatched and now all larvae have pupated. We also collaborated with research from Campinas State University (São Paulo), sending specimens from *Heliconius erato*, since they had never collected this species in Florianópolis and will now conduct a population

analysis under the guidance of Dr. André Freitas, who is a national reference in butterfly research.

Our next steps are the confirmation of all species identification and field work for vegetation characterization at each area sampled, which will be organized in partnership with FLORAM and the Postgraduation Program at the Santa Catarina Federal University, since the vegetation data will also be used on undergraduate studies. Once all data is collected, we will be able to start the statistical analysis and the study of the relation between butterflies' alpha and beta diversity and the environmental variables in order to answer the ecological questions raised by my PhD project.

Preliminary results' report will then be presented for the academic community at the University, the Rufford Foundation and FLORAM. Also, a field guide presenting the species recorded on each Protected Area sampled will be elaborated and presented to FLORAM, so it can be used for the management actions and environmental education activities.

Regarding the Small Grant budget, we have spent all items described and approved except for the entomological drawers and the bibliography (highlighted in green on TABLE 3), which are both planned to be purchased for the next semester when we start setting the specimens and writing the first scientific publication.

ACCOMPANYING PHOTOS

1. Checking VSR trap for specimens at the Trilha do Caminho da Gurita (credit: Larissa Nascimento)

2. Measuring *Caligo brasiliensis* wingspan at the REVIS Morro do Lampião (credit: Felipe M. Vianna)

3. *Hamadryas arete* (top) and *Hamadryas feronia* (bottom) at the MONA Peri (credit: Liridiane B. Pillar)

TRIBE	SPECIES	ABUNDANCE	
	Ectima_thecla	3	
AGERONIINI	Hamadryas_amphinome	15	
	Hamadryas_arete	8	
	Hamadryas_epinome	51	
	Hamadryas_februa	2	
	Hamadryas_feronia	13	
	Hamadryas_iphthime	8	
ANAEINI	Consul_fabius	4	
	Memphis_ryphea	1	
	Caligo beltrao	2	
	Caligo brasiliensis	10	
	Dasyophthalma creusa	5	
BRASSOLINI	Dasyophthalma rusina	1	
	Eryphanis_lycomedon	13	
	Narope cyllastrus	1	
	Opoptera sulcius	13	
	Opsiphanes invirae	15	
	Colobura_dirce	35	
COEINI	Historis_odius	1	
	Smirna_blomfildia	5	
EPICALIINI	Catonephele_acontius	4	
	Myscelia_orsis	45	
	Ithomini sp1	2	
ITHOMINI	Ithomini sp2	29	
	Dircenna_sp	1	
	Episcada_sp1	1	
	Episcada_sp2	1	
	Ithomia_drymo	244	
MORPHINI	Morpho_epistrophus	3	
	Morpho_helenor	35	
	Archaeoprepona_amphimachus	13	
PREPONINI	Archaeoprepona_demophon	4	
	Archaeoprepona_demophoon	5	
	Carminda_paeon	2	
	Carminda_sp	1	
	Euptychoides_castrensis	1	
	Godartiana_sp	1	
SATYRINI	Hermeuptychia_hermes	12	
	Pareuptychia_ocirrhoe	21	
	Splendeuptychia_doxes	2	
	Splendeuptychia_hygina	1	
	Taygetis_acuta	1	
	Zischkaia_sp	2	
VICTORINI	Siproeta_steneles	4	
Hesperid	eo_sp (Family HESPERIIDAE)	1	

TABLE 1. SPECIES LIST AND ABUNDANCE

1	Carol Neves Ananias	Paid field assistant
2	Felipe Medina Vianna	Paid field assistant
3	Luana Boeno dos Santos da Silva	Paid field assistant
4	Liridiane Batista Pillar	Paid field assistant
5	André Luis Klein	Volunteer researcher
6	Idelmara de Alencar Tinoco	Volunteer researcher
7	Larissa Nascimento	Volunteer researcher
8	Santos Gonçalves Magagnin	Biology undergraduate volunteer
9	Sofia Gabriel Marafon Bacca	Biology undergraduate volunteer
10	Clara Flor Nogueira	Biology undergraduate volunteer
11	Lara Gomes Ghizoni	Biology undergraduate volunteer
12	Amanda Leal Freitas	Biology undergraduate volunteer
13	Camila Borges	Biology undergraduate volunteer
14	Matheus Guizi	Biology undergraduate volunteer
15	Henrique	FLORAM technician
16	Leonardo de Oliveira	General public

TABLE 2. LIST OF FIELDWORK PARTICIPANTS

TABLE 3. BUDGET PROGRESS

Rufford Foundation Small Grants – Budget Description	Total Cost	
Subsistence payment (90 days)	1500	
Food (90 fieldwork days/ meals)	600	
Fuel (estimated 600 litres)		
Car rental	1090	
Entomological drawers (5 units and shipping)	130	
VSR Entomological traps (50 units and shipping)		
Bibliography (2 books and shipping)	100	
Management Fees for Indirect Costs (Overheads)		
Additional field equipment (ropes, tapes, wire, permanent markers, etc.)		
Butterfly baits (banana and sugar cane juice)		
Car parking	60	
Field gear	200	