

## **PANTANAL CONSERVATION RESEARCH INITIATIVE**

**LOCAL EDUCATION FELLOWSHIP TEAM  
AQUATIC ECOLOGY, PECCARIES & PIGS, BATS  
JAN 17 - 28 2004**



**PREPARED BY:**

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### **INTRODUCTION**

The Conservation Research Initiative (CRI) in the Pantanal is the result of an alliance between Earthwatch Institute and Conservation International of Brazil. The CRI supports research teams of local scientists, Earthwatch volunteers, and fellowship recipients with the goal of contributing data useful for the Pantanal-Cerrado Corridor initiative of Conservation International (CI). The Earthwatch Institute Education Department involves participants as active learners in science research and public engagement activities to enhance the acquisition of new skills, knowledge, and commitment to a sustainable environment. Through fellowship programs, we are able to provide professionals, educators, and students with the opportunity to experience the Pantanal Conservation Research Initiative.

Conservation International is implementing a Municipality Pantanal- Cerrado Corridor Project with 15 municipalities located within the biodiversity corridor. With federal and municipal authorities, educators, and active members within each municipality, CI provides the equipment and training in GIS so they can monitor and manage their natural resources. In addition CI provides environmental training courses for teachers, and educational materials on biodiversity conservation, ecological/ biodiversity corridors, and fire.

**BRAZIL FELLOWSHIP TEAM PARTICIPANTS & AFFILIATION:**

<b>Participant</b>	<b>Affiliation</b>
Doralice Ocampos Franco	Public school teacher: State school Salustio Areais
Generson Clay Giordano	SEMA: State Environmental Agency and Tourism (Environmental educator)
Alexandre Augusto Ferreira Ferro	IDATERRA: Institute of Agricultural development
Lilian Cristina Horta de Almeida Andrade	IMAP/SEMA: Environmental Institute of the Pantanal Environmental educator and provides research license
Cleber Araujo Diniz	Public school teacher in Taboco
Carlana Teodoro de Carvalho	Public school teacher in Coxim
Ana Dejamira de Menezes	City of Rio Negro - Social Assistance for Adolescents – primarily environmental education.
Favio Henrique Cabreira	Public school teacher
Nilvana Aguilera	Public school teacher
Saulo Ferreira	Highly recommended student from Taboco who is active in the regional conservation issues.
Arlete Pereira de Souza	OIKOS: (Social environmental cooperative) Consultant for environmental and social affairs (specifically environmental education and indigenous region). Also the coordinator for CI municipality projects
Ramona Medina Ortiz	City of Aquidauna; Geography public school teacher
Anderson Rodrigues de Souza	State of Goias: works for the city - Environmental department.
Maria do Carmo A dos Santos	Public School teacher in Corginho and facilitator for the team.

**OBJECTIVES:**

CI in partnership with Earthwatch provided fellowships primarily for active educators and conservation professionals working in these municipalities.

The main objectives were to educate fellows with respect to local conservation issues and encourage them to pass on their knowledge to the communities they serve. Special emphasis was given to the importance of biodiversity, increasing awareness concerning threats, and the role of local people in conservation.

**METHODS:**

About 15 conservation professionals and public schools were contacted, in the municipal districts participating with CI. They were oriented by phone and provided with the EWI applications (translated in Portuguese). Once in the field, they worked as volunteers on three research projects. They also received lectures concerning the CRI, CI's Cerrado-Pantanal corridor proposal, and the aquatic, bat, and peccary & pig project. The PI's involved were: Donald P. Eaton (Aquatic ecology), Alexine Keuroghlian (Peccaries and Pigs), George Camargo (Bats), Ellen Wang (Herpetology and monitoring), and Camila Donatti (Phenology and Mammal census).

**FIELD ACTIVITIES INCLUDED:**

- Bats – ecological roles and survey of bats
- Geographical Positioning System - GPS
- Aquatic Ecology
- Peccary and Pig ecology
- Fruit phenology
- Mammal census
- Trail maintenance
- Fruit census
- Herpetology pit fall trap preparation



Means of transportation because of floods



Mist netting bats



Measuring oxygen and conductivity in a cattail baia



Aquatic Ecology field orientation



Preparing more pitfall traps for herpetology project



Sorting through peccary and pig scat



Radio collaring a peccary



Mounting plant specimens

**EXPECTATIONS QUOTED FROM FELLOWS (VIA APPLICATION FORM) BEFORE THE EXPEDITION:**

“I am a teacher and I also work in the Environment Department for the city of Aquidauana. This experience will help me understand how a scientific research project is conducted at a research center. I want to learn about biodiversity and field work, because this will help me implement my own projects. It will be wonderful to share local experiences with other conservation professionals.”

“I hope to apply everything I learn from this conservation center so I could pass this on to the general public living within the biodiversity corridor.”

“I hope to use this experience in the field and so that I could improve the quality of my work.”

“This experience will help me understand and evaluate the numerous environmental impact projects presented to me at my work. I think I will be able to learn more and pass this on to the community, and make them understand the need to work in harmony with their natural resources. I also look forward to exchanging and sharing experiences with a group involved with different environmental issues and problems.”

“I hope to bring this experience to my class, and stimulate my students how wonderful and important the Pantanal is to the world.”

“This expedition can increase my knowledge concerning biodiversity and conservation. I will be able to evaluate environmental problems, and find possible solutions together with my students and community. I also would like to create an environmental education course at my school.”

"I hope to learn about everything concerning the Pantanal so I could pass this new information on to all those at work. Its important for the young adults to learn about their enviroment because they will be the future conservationists."

"I want to learn about conservation, Pantanal, research, so I could apply this new knowledge to my classroom and stimulate my colleagues and students."

"I see farmers deforest their land and plant crops that are not sustainable, but by the time the farmer realizes this, the forest is already gone. I am part of CI's municipality project, and I believe this experience will help me deal with the community, promote eco tourism as an alternative form of income, and pass on this acquired knowledge to the locals."

**JOURNEY REPORT BY MARIA DO CARMO (FACILITATOR):**

Pantanal January 17-28, 2004

Team: Brazilian teachers & conservation professionals from the cities within the Corridor of Biodiversity.

*At the beginning of January, I was invited to participate, once again, with the environmental education project supported by Earthwatch Institute (EWI) and the Conservation International (CI) that takes place at the Rio Negro farm. To be at this project is a pleasant and challenging activity for me. It gave me an opportunity to learn more and for me to grow in my skills.*

*On January 16, I was given the opportunity of working as a facilitator for the educator team. One week before, Meg from EWI, sent me the "Facilitator Guidelines" for the February expedition and Mariza, from CI, sent me the participant applications. To prepare myself as a facilitator, I read all the applications and took notes about the main characteristics of each fellow.*

*I met part of the team at a Hotel in Campo Grande, Aquidauana, had already gone to the farm on the first flight. I met them there. The first day on the farm was for us to get acquainted and for everyone to get settled in. It was a good day to talk with small groups of fellows or one on one. I explained the goals and activities that they will be participating in. It was a good opportunity for me to discuss with them their own expectations and doubts. I learned a little about each of the fellow's personalities. Late that afternoon we went for a nice and relaxing boat ride and for a river swim.*

*The first night, Ellen Wang asked me to work with a group doing the fruit census. We would gather fruit in the mornings and in the afternoons we would stay in the lab to examine and label the fruit. The morning of the January 18, the researchers spoke about their work and gave an explanation of what kind of activities each group would be doing. In the afternoon we started the field work.*

*As we have arranged, I would guide a group (2 persons) to do the fruit census in the mornings. The afternoon we stayed at the main house to work, in the lab and working on the essays of each fellow. The essays were journal entries of what they learned or saw and what they would do with this information when they got back to their own home or job. We also spent time chatting, talking about doubts and sharing information. These moments were special since we were all teachers and we could share ideas. This time made me feel great and very enthusiastic.*

*As the days went by I would gather information on each of the fellows and their personalities. I put abstracts for what they did at the end of this report.*

*One of the most significant accounts that I read was Anderson's. He told how important it was for him to humble himself and realize that he doesn't have all the answers. Many times I heard that this experience was a life lesson for all aspects of it. They talk of how they have improved spiritually and mentally on this trip. Many spoke of overcoming fears and learning much.*

*I am very grateful for the opportunity to be a facilitator. To be with teachers that work in the public schools has given us an opportunity to share our passion and wonder for teaching. I realized that this position (teaching) was a perfect place to discuss teaching strategies that worked and those that didn't. In each conversation we had one goal: to find out the best way of teaching.*

**PROJECTS DEVELOPED BY THE PARTICIPANTS FOR THEIR LOCAL COMMUNITIES & CITIES (MARIA DO CARMO'S REPORT):**

- These projects were presented to their fellow colleagues the day before departure:

**Ana Dejanira**, 45 years old,

RioNegro - MS. Works with teenagers and children in the City of Rio Negro

**Project:** to create a nursery of local trees with the teenagers and their mothers, for reforestation.

**Alexandre Augusto** 31 years old,

Nioaque. Agricultural engineer - MS. Works for an environmental organization of the government.

**Project:** to develop organic crops and a nursery of local plants for reforestation in the gallery forest of indigeneous regions of Nioaque. He already works with this community.

**3. Anderson Rodrigues** 26 years old,

Chapadão do Céu - GO, works for the city in the environmental department.

**Project:** to create a city map with all the information about the area to be distributed at the schools.

**4. Arlete Pereira** 34 years old,

represents OIKOS, the NGO which is partner with CI for environmental education centers in the municipalities of the biodiversity corridor.

**5. Carlana Teodoro**, 25 years old,

Coxim- biology teacher - MS, works with public schools.

**Project:** to prompt the consciousness about the importance of water through the analysis of patterns of drinking water. With the student, the goals of the project are to analyze the water at schools and learn some concepts of chemistry, physics and biology.

**6. Cleber Diniz**, 36 years old,

teacher at municipal school of Tabobo - MS.

**Project:** to develop environmental concepts with the use of art techniques.

**7. Doralice Ocampos** 27 years old,

biologist working with the environmental department of Aquidauana - MS.

**Project:** Working together with Nilvana from the same city, they intend to gather data about the João Dias Creek. This creek passes through the city and has a historic meaning. Nowadays it is polluted, and the project will try to find out the causes examining:

1. the source, which is in an indian village.
2. the middle, which flows through a rural area and
3. the end, which is in the urban area.

**8. Flavio Henrique**, 26 years old,

Aquidauana, just graduated in Geography, teacher in the elementary school. MS.

**Project:** Knowing and preserving the environment through ecological trails. The teacher intends to use trails on urban parks to teach environmental concepts and to prompt ecological interest.

**9. Generson Clay** 29 years old,

studying tourism. He administrates a municipal conservation unit. Corumbã - MS.

**Project:** Engage the community with the conservation unit he administers. Since the development of this unit they are having problems with the local community about preserving the park. The project's goals are to involve the schools nearby and offer them an environmental education program.

**10. Lilian Cristina** 36 years old,  
biologist works at the environmental department of the state. Coxim - MS.

**Project:** to promote environmental education through talks to the government organizations. Usually gives them at the cities they supervise. The talks will have a new focus from now on: environmental sense and the importance of research.

**11. Nilvana Aguiera**, 29 years old,  
just graduated in geography. From Aquidauana - MS. She is working together with Doralice with the João Dias Creek Project.

**12. Ramona Ortiz** 43 years old,  
geography teacher from Aquidauana - MS.

**Project:** to reforest the gallery forest of Aquidauana River in the urban area. The Aquidauana River goes through the city and its gallery forest is all gone. The project's goal is to plant native trees so the forest will come back.

**13. Saulo Ferreira** 17 years old,  
a student that is participating in this program for the second time from Taboco - MS.

**Project:** to study or research the Giant Armadillo. This animal has been seen close to his property. The goal is to avoid its disappearance.

#### **GENERAL FEEDBACK FROM FELLOWS:**

General themes that emerged from the evaluations were that the fellowship opportunity provided them with knowledge about:

- The scientific method.
- The work involved in conducting a scientific research project, and
- Clarified certain “scary” thoughts about wildlife and different habitats in the Pantanal.
- The importance that research has in providing information for the conservation of the Pantanal – and how all of our organizations and NGO’s have an important role in the Pantanal.
- Getting to know, understand, and learn more about the Pantanal’s ecosystem and the key species.
- How they could apply what they learned back to their communities and schools.

#### **SPECIFIC COMMENTS BY THE FELLOWS CONCERNING THE BENEFITS & PROFESSIONAL GROWTH THAT THE EXPEDITION PROVIDED:**

“I would like to come back and be a volunteer again. I learned so much concerning the role of certain animals. I had no idea that peccaries are important seed predators and dispersers, or that bats are important pollinators, or how complex baias and salinas can be.”

“I want to go back and study so I could also conduct research in my area.”

“I want to go back and study more so I could do field research. After all these years living in the Pantanal, this expedition allowed me to understand and learn about the Pantanal’s ecosystem. I hope that I can stimulate my students and community as much as the researchers have stimulated me.”

“I used to think that caimans would attack me even if looked at them, and here I worked in baias and salinas while they were by my side. I was quite wrong about the behavior of many animals. Most of them want to run away.”

“I learned that we need to carefully contemplate how we use our natural resources by evaluating scientific data.”

“I realized that we all have similar experiences back in our communities, and by working together we could accomplish much more. I really enjoyed the time spent with my fellow volunteers.”

“Everything, as little as it may seem, plays an essential role in the ecological cycle.”

“On the bat project, I had insisted that the nets should be stretched and extended in a specific form. I insisted that my idea was good, but when I saw how they raised their nets I was ashamed at myself. I learned that I needed to be more humble, learn from others, and not create obstacles for myself in accepting new concepts and ideas.”

“I did things that I never imagined I would ever do in my life. I overcame my fears, and realized that I need to fight harder to achieve my goals back in my community.”

“I learned that doing research is not at all simple or glamorous. These researchers are dedicated, they respect the volunteers, their project, and each other. Gathering, and analysing data is a slow process, and requires patience and passion for their work. I have found new energy to go back and implement my own projects. “

“The aquatic ecology project is ideal to make lesson plans for our kids in the classroom. There is water everywhere. “

#### **COMMENTS BY THE RESEARCHERS AND FIELD DIRECTOR:**

“All the researchers enjoyed this interaction with the Brazilian educators and conservation professionals. This group absorbed everything, were extremely enthusiastic, and flexible. We had to face a lot of obstacles because of the floods, and often got stuck or had to move around in the tractor. However this group was up for anything, and made our work a lot more pleasant. Everything was new to them, the bats, peccaries not being so aggressive, life in a baia, etc.”

“They were in awe with the wildlife, our work, and were really excited to start their projects back in their communities.”

“This type of group should be repeated, because there are many other educators and conservation professionals that are interested in participating.”