

EARTHWATCH INSTITUTE

Fourth Year Research Report

PI Name: Ellen Wang

Project title: Amphibians and Reptiles of the Southern Pantanal

Progress towards objectives

Objective 1

To determine the herpetological diversity of the Pantanal region. In addition to determining extant species, attempts will be made to ascertain population sizes and health. A database of resident anuran species and population demographics would be a probable consequence of this project and voucher specimens will be secured and maintained as species references

The project developed at Fazenda Rio Negro in the Pantanal whose specific goal was to determine the diversity and distribution patterns of the herpetofauna community started in 2004 until 2006. Because the study site was a preserved private reserve, the data collected has been presented in national and international meetings but has not yet been published in a peer-reviewed journal. The researchers however have compromised to work on such publication this year.

Objective 2

Investigate the ecology of the Pantanal turtles, particularly the Pantanal Toad Headed Turtle, *Acanthochelys macrocephala* and the Red Foot Tortoise, *Chelonoides (Geochelone) carbonaria*.

The data collected for the red-footed tortoise was very interesting and we are just about to finalize a paper to be submitted to The Journal of Herpetology, a well-known journal in the herpetology area. As for the other species, the toad-headed turtle, although many animals were marked and measured, none were recaptured and the data was not of any great scientific interest.

Objective 3

Secure and identify an unidentified species of anurans, most probably Leptodactylids, observed building foam nests in the Salinas. All climatic variables that are relevant to resident breeding anurans will be recorded. Prior investigations of Leptodactylids, including Pantanal species, provides a basis for comparing the as yet unidentified species. Related factors, such as forest canopy cover, oviposition site selection, and anuran responses to rainfall will also be examined for the salina breeding species. Attention will also be paid to other anuran species breeding in different aquatic habitats that occur at the Conservation Research Initiative (CRI).

The field work was very punctual and not always during the same time frogs were making their foam nests. Also, the time spent for collecting data through pitfall traps was very long and demanding. Volunteers sometimes worked more than 10 hours a day, which made it impossible to do anything else.

Objective 4

Initiate a preliminary study on the seasonal distribution of the Jacare Caiman. Volunteers will visually census and monitor caiman activity during the day and at night in all aquatic habitats. Volunteers will also record environmental variables such as water and substrate temperatures as well as record the daily movements of individual caimans. Future research will be conducted on feeding habits and prey selection of this species and compared to other South American species of crocodilians.

We were unable to focus on this objective due to the same reasons explained for objective 3.

Objective 5

Use the CRI as a teaching center for teachers who come on the project, and increase their knowledge base on reptiles and amphibians to increase the value and validity of future lessons.

The former CRI gave us a great opportunity to educate not only teacher and student fellows and volunteers, but also other researchers and locals whose fear especially for reptiles is extreme.

What are the significance and benefits of your research at the following levels?

- **Local (to the area of the research site)**

1. In both Fazenda Rio Negro and Nhumirim there has been a marked change in behavior of the local community. Before we started the project, farm employees naturally killed snakes whenever they came across one. But now, they even bring us snakes and are able to distinguish the poisonous from non-poisonous ones
2. Neighbor farmers are interested about learning more about snakes because they believe snakes sometimes kill the cattle and horses. Whenever possible, we show visitors the snake and frog collection kept in the farm.

- **National / Regional**

1. One of us (EW) was on local and national TV programs because two famous Brazilian actors filming a soap opera in the research site were learning about snakes and also helped in the fieldwork.
2. In November 2004, a newspaper article entitled "Turistas pagam para caçar sapos". Published in a Sunday edition of "O Estado de São Paulo", one of the most important periodicals in Brazil featured Earthwatch Institute and Volunteers, highlighting several projects, including the Herpetology Project. Ellen Wang and Vanda Lucia Ferreira were interviewed.

- **International**

Several fellow students, teachers, corporate workers, policy makers and community members from different countries have participated our project and they take back to their communities the knowledge acquired during fieldwork. They do not learn only about scientific methodology, but also to respect and protect natural resources. What they experience in the Pantanal is taken back to their original countries, and they become strongly engaged towards this new way of life and therefore, contribute with the worldwide conservation of the environment.

Dissemination of results

In line with our mission, the Earthwatch Institute is committed to research and results that will be disseminated to local, national, and international audiences.

Printed:

Books / book sections; peer reviewed scientific publications; reports, management plans or policies; fact sheets, brochures, leaflets, pamphlets, posters, academic dissertations, annual reports, proceedings of conferences or workshops; letters; newsletters.

Publication type (from the list above): peer reviewed scientific publications

Author: Ferreira, V.L., Wang, E. & Himmelstein, J.

Full reference: Ferreira, V.L., Wang, E. & Himmelstein, J. 2005 . Geographic distribution. *Phalotris nasutus*. *Herpetol. Review*. 36 (20): 204.

Audience: International Scientific Community

Acknowledged Earthwatch? Y/N: N

Publication type (from the list above): management plan

Author:

Full reference: Management plan for the Fazenda Rio Negro RPPN. Meeting between CI and several EW PIs in April 28-29, 2005 in Campo Grande, MS.

Publication type (from the list above): Journal: Biotropica

Author: Ellen Wang, Don. P. Eaton, Mara C. Kiefer, Vanda L. Ferreira, Alexine Keuroghlian, J. Himmelstein and Fernanda Marques

Full reference: Do Cattle Ranching Affect the Herpetofauna Diversity in the Brazilian Southern Pantanal? (*in preparation*)

Audience: International Scientific Community

Acknowledged Earthwatch? Y/N: Y

Publication type (from the list above): Journal: Journal of Herpetology

Author: Ellen Wang, Camila I. Donatti, Vanda L. Ferreira, Josué Raizer and Jeffrey Himmelstein

Full reference: Food habits and notes on the biology of *Chelonoidis carbonaria* (Spix 1824) in the Southern Pantanal, Brazil

Audience: International Scientific Community

Acknowledged Earthwatch? Y/N: Y

Mass media: broadcast production; film; TV, radio, print (newspaper/ magazine coverage); Press releases; press conference; interview, article creation; press trip

Publication type (from list above): newspaper coverage

Author:

Title: Turistas pagam para caçar sapos

Audience: National readers

Acknowledged Earthwatch? Y/N: Y

PDF submitted? Y/N:

Free text box for extra detail: Published in a Sunday edition of “ O Estado de São Paulo”, one of the most important periodicals in Brazil. The article was about Earthwatch Institute and Volunteers, featuring several projects, including the Herpetology Project. Ellen Wang and Vanda Lucia Ferreira were interviewed.

Publication type (from list above): magazine coverage

Author: Ken Mallory

Title: The Pantanal: Flooded with Life. Nov/Dec 04, The Expeditioner.

Audience:

Acknowledged Earthwatch? Y/N:

PDF submitted? Y/N:

Free text box for extra detail:

Meetings and conferences: conferences; workshops; training sessions; discussions; local community meetings and events.

Publication type (from list above): lecture

Title:

Audience: Undergraduate and graduate students and community members

Audience size:

Acknowledged Earthwatch? Y/N:

PDF submitted? Y/N:

Free text box for extra detail: Mar. 2004. Presentation on the Herpetology Project at University of Pennsylvania. Speaker: Jeff Himmelstein

Publication type (from list above) presentation

Title: Amphibians and Reptiles of Southern Pantanal

Audience: Conservationists, undergraduate and graduate students, environmental agencies representatives, scientists.

Audience size:

Acknowledged Earthwatch? Y/N:

PDF submitted? Y/N:

Free text box for extra detail: presented by Vanda L. Ferreira, during the IV SINPAM (Symposium for the Natural, Social and Economical Resources in the Pantanal) organized by Embrapa in Corumbá, MS, Brazil, in. Participants: Ellen Wang and Vanda Lucia Ferreira. Nov. 2004.

Publication type (from list above): presentation

Title:

Audience:

Audience size:

Acknowledged Earthwatch? Y/N: Y

PDF submitted? Y/N:

Free text box for extra detail: Annual EW conference, Boston, MA. Conservation Research Initiative poster presented by Jeff Himmelstein. Nov. 2004.

Publication type (from list above): Presentation

Title: Symposium 17 - Pantanal Wetlands Biodiversity and Conservation

Audience: International scientific community

Audience size:

Acknowledged Earthwatch? Y/N: Y

PDF submitted? Y/N:

Free text box for extra detail:

The Annual Meeting of the Association for Tropical Biology and Conservation 2005 – Uberlândia, MG – Brazil: Symposium 17 - Pantanal Wetlands Biodiversity and Conservation
<http://www.atbc2005.ufu.br/speakers.html>

Publication type (from list above): Presentation

Author:

Title: Education, Youth and Technology for Sustainable Development

Audience: Educators, policy makers, scientists

Acknowledged Earthwatch? Y/N: Y

PDF submitted? Y/N:

Free text box for extra detail: 59th Annual DPI/NGO Conference

Partnerships and Collaborations

Provide a brief report on the involvement of partners and other stakeholders in project delivery for the period covered by this report. *Specify the nature of the collaboration. If you have a formal agreement with an organization, please note whether a memorandum of Understanding is in place, letter of agreement, etc.*

1. Conservation International – Logisitics, funds
2. Fazenda Rio Negro – Logisitics, lodging
3. Embrapa – Logisitics, funds
4. Fazenda Nhumirim – Logisitics, lodging
5. Fazenda Mangabal – Logisitics, lodging
6. Fazenda Baía das Pedras – Logisitics
7. Uniderp – Logisitics, research
8. Pousada Araraúna – Logisitics, lodging
9. UFMS – Logisitics, scientific support
10. WCS– Logisitics, funds

Educational Opportunities and Capacity Building

a) If appropriate, provide a brief report on how the project has created or enhanced educational opportunities for project stakeholders, including the local community (excluding Earthwatch volunteers)

The project has provided opportunity mainly for graduate and undergraduate students from Mato Grosso do Sul to participate the project acting as team leaders. The cultural and educational exchange among students and volunteers from all over the world was a rich experience for both sides.

b) If appropriate, explain how the project has increased capacity to work towards a sustainable environment in the local area/country

After we finished field work at Fazenda Rio Negro, contact with Conservation International representatives in Campo Grande was discontinued. According to what was originally planned, the data collected by the project would be used by CI to help design the management plan for the farm. I believe the data was used in this management plan.