

Project Update: June 2021

How is the project going?

This first quarterly report aims to inform the actions carried out. The project is also supported by the Matinguari Laboratory at the Federal University of Mato Grosso do Sul, Serra da Bodoquena National Park, the NGO Pacto Ambiental, in addition to the grant provided by the Rufford Foundation. Thank you very much for this support.

In order to facilitate communication with the target audience, in addition to helping promote it, we created a popular name for the project: Projeto Sapo Pantaneiro (Pantanal Toad Project). We created a project webpage (available on my website), and an Instagram (@projetosapopantaneiro), which will help us with environmental education and scientific dissemination in addition to providing more information about the project for all interested. Many actions included in this report are already available on the page and on Instagram. Thus, our actions can also be followed by you on the network.

Our actions are related to the three main objectives of the project: 1) to promote environmental education and scientific dissemination on the internet and in public schools in the Pantanal; 2) reveal the diversity of the *Pristimantis* genus in the region with the description of a new species; 3) understand the species richness patterns for the Upper Paraguay River Basin and assess the efficiency of protected areas in harbouring diversity under climate changes.

Environmental education and scientific dissemination

We created the logo of the project (on the left) that makes up our identity that will be used in various media related to scientific dissemination on the internet and material for environmental education in schools and parks. We are creating a comic with the same artistic features as the logo and teaching what should be done in the event of an encounter with amphibians. This comic will also be used in our material for students, tourists, and communities.



As part of environmental awareness on the internet, I participated in a "live" on Instagram (also available on YouTube) together with the National Parks Project on scientific research and diversity in protected areas. Also, I presented a lecture entitled

"The Pantanal and its herpetofauna" (on the right) offered by the Mapinguari Laboratory (UFMS) which will be available on YouTube in the future.

Related to Pantanal schools, I am talking to the teachers about the execution of the project. We are defining the number of project participants (teachers and students) to start working with environmental education through an online lecture and later a face-to-face action. Teachers are also participating with opinions and ideas for creating the material that will be distributed. I am already vaccinated against COVID-19, and I believe that early next year it will be safe for these face-a-face actions.

Revealing amphibian diversity: the *Pristimantis* genus

So far, we have carried out some fieldwork in Serra da Bodoquena and in the Chaco region in Brazil, Porto Murtinho municipality, a southern region of the Pantanal and Bodoquena. In the Serra da Bodoquena National Park, we carried out fieldwork in the Rio Perdido sinkhole, the Poço do Rio Azul, the Private Natural Heritage Reserve (RPPN) Saci on the edge of the SBNP, and other areas along the trails (pictures on the next page). The new species of *Pristimantis* which we are describing has already been recorded in two of these areas. However, during our search, we did not record the activity of the species. This is also important information as we now know that the species has reproductive activity only in the rainy season (October to March). Therefore, the next fieldwork trips are scheduled to start in October 2021.



We also continued a scientific paper for the synonymisation of *Pristimantis ventrigranulosus*. Along with the other authors of the manuscript, I gained access to specimens of the *Pristimantis* species involved in the work from their type localities. With that, we are already in the final phase of writing this article.

Specimens of the genus *Pristimantis* have been registered for a long time in the region around the Pantanal, but the taxonomic definitions were never resolved. We will reveal this diversity with this project.



Revealing amphibian diversity: the Pantanal and surroundings plateaus

The fieldwork carried out in the Chaco of Brazil on the border with Paraguay, the southern region of the Pantanal and Serra da Bodoquena, is related to the objective of understanding the richness patterns of the Upper Paraguay Basin. This is a region with few collections and is home to high diversity, especially for Brazil. Some species only occur in this region of the Brazilian territory. Thus, we seek to fill the sample gaps in the region to improve our database for this purpose.

We need the greatest coverage of distribution data to generate our potential distribution models today and in the future. These models will take into account the climate and land-use change and will reveal the important areas for amphibians amidst these scenarios. We will then relate these results to the protected areas established in the region and verify their efficiency in covering amphibian diversity.

With this in mind, we are improving our database with these fields running, as well as organising the scripts in R software code for the models. I already bought a new powerful computer to run these models. I believe that in the next quarterly report, I will already have some model results to submit.



Region of the Chaco Ecoregion in Brazil, municipality of Porto Murtinho, borders Paraguay.

