

Project Update: June 2023

- **Participation in the Rufford Foundation Learning event in Brazil (April 13th to 17th 2023).**

Our project was one of the 18 selected to participate in the Rufford Foundation Learning Event in Brazil. This was held in the city of Olho d'agua do Casado in Alagoas state, and featured several lectures, interactive activities, workshops and field activities.



Left: Participants of the event. Right: Activities interactive.

- **Monitoring the population of bushmaster snake in the Baturité Massif, Ceará, Brazil.**

We continue to monitor the population of the subspecies in Baturité Massif, Ceará state, Brazil. These campaigns are also part of my master's project for data collection and monitoring of the already known population of the subspecies in the state. So far, we have captured 26 animals, 18 live and eight dead. We were able to observe large adult individuals and two young individuals. On average, bushmasters from Baturité Massif had a total length of 1420mm, the largest 2120mm and the smallest 1130mm (Photo_4_Maior (left) and smaller (right) bushmaster individuals monitored). We continue to collect ecological and biological data from captured bushmasters. The observation and sampling of these animals was only possible due to the active contribution of the Baturité Massif communities. We managed to formalise partnerships with local firefighters, Environmental Police of Ceará state, local trail drivers, local politicians and the community.



Left: Last bushmaster captured by the project. © Lucas Lima. Right: (Collecting data from a bushmaster.

- **Mapping of localities of occurrence of the subspecies in the Ceará state.**

Previously to our project there were only 14 records of the subspecies for the Ceará state, with a wandering record for the semi-arid region in the city of Quixadá, in addition to rare records of animals in life. Its distribution in the state was completely unknown, especially in its only known area of presence, Baturité Massif. So far, our project has managed to map 88 areas where the subspecies occurs within the Baturité Massif. In addition, we received reports of old sightings in another fragment of the Atlantic Forest, which we will verify the veracity in this final stretch of the project. We cannot send the map of locations yet, as it is being prepared for a scientific publication.

- **Writing the master's thesis with our sampled data.**

With all the data obtained so far, I am producing a master's thesis entitled "Ecology and Conservation of bushmaster (*Lachesis muta rhombeata* Linnaeus, 1766; Serpentes: Viperidae) in Ceará state: Population Size, Range of Occurrence, Area of Occupancy and Associated Threats." The research is linked to the Systematics, Use and Conservation of Biodiversity Program (PPGSIS) of the Federal University of Ceará, under the guidance of Prof. Dr. Hugo Fernandes-Ferreira and co-supervision of Dr. Rodrigo C Gonzalez. I intend to defend this work in August 2023, and produce at least three scientific works for publication.

- **Production and defense of the final graduation work by Lídia Silva de Lima.**

Lidia is a member of the project team, lives in the monitoring area (Baturité Massif) and is a biology student at the State University of Ceará (UECE). She produced and defended final graduation work in biology on June 29th, 2023, with the research entitled "Citizen Science as a data collection instrument for conservation of *Lachesis muta* (Serpentes: Viperidae) in the Baturité Massif, Ceará, Brazil."

The image shows a Zoom meeting interface. At the top, it says "Lidia Silva de Lima está apresentando". The main content is a presentation slide with the following text:

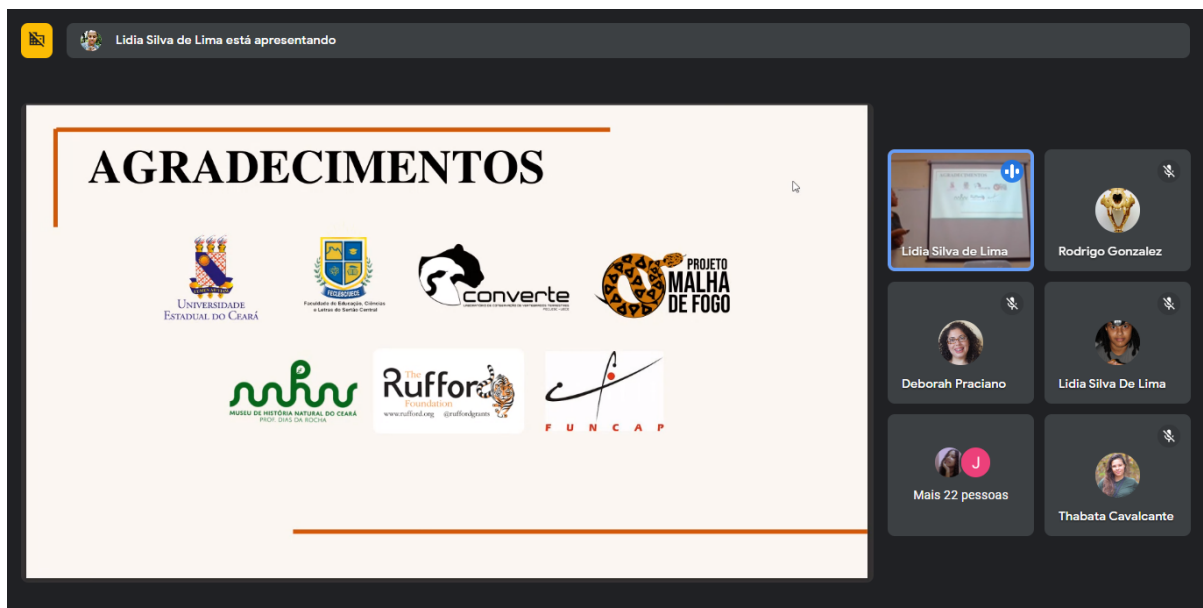
UNIVERSIDADE ESTADUAL DO CEARÁ
FACULDADE DE EDUCAÇÃO, CIÊNCIAS E LETRAS DO SERTÃO CENTRAL
CURSO DE LICENCIATURA EM CIÊNCIAS BIOLÓGICAS

CIÊNCIA CIDADÃ COMO INSTRUMENTO DE COLETA DE DADOS PARA CONSERVAÇÃO DE *LACHESIS MUTA* (SERPENTES: VIPERIDAE) NO MACIÇO DE BATURITÉ, CEARÁ, BRASIL.

Discente: Lidia Silva de Lima
Orientador: Prof. Dr. Hugo Fernandes-Ferreira
Co-Orientadora: Thabata Cavalcante

Quixadá – Ceará
2023

On the right, there is a gallery view of participants: Lidia Silva de Lima, Rodrigo Gonzalez, Deborah Praciano, Lidia Silva De Lima, Mais 14 pessoas, and Thabata Cavalcante. The bottom of the screen shows the Zoom control bar with icons for mute, video, chat, and other functions, along with the time "18:16" and the text "Defesa de TCC".



Presentation of Lidia's final graduation work.

The objective of this work was to evaluate the effectiveness of citizen science as a tool for data collection and conservation of bushmasters in the Baturité Massif, Ceará, Brazil. For this, we used and conducted semi-structured interviews with 33 people from two groups in three municipalities in the Baturité Massif. Group 1, with 20 people who had not had direct and active contact with the project, and Group 2 with 13 people who actively contributed to the project.



Semi-structured interviews with the research groups.

The research found that the engagement of Group 2 in the project contributed to significant changes in perception regarding bushmaster when compared to Group 1, showing that citizen science not only contributed to cover gaps in knowledge about the subspecies, but also in the change in perceptions and attitudes of residents of the Baturité Massif towards bushmaster.

- **Assembly of material for environmental education activities.**

We produce all informative material that will be used in lectures in communities, schools and associations. We will use didactic models of dentition (Photo_8_Didactic model of snakes), informative banners (PDF_1_Informative banners), a mini guide with

the venomous snake species of the Ceará state and a specimen of bushmaster fixed in formaldehyde.