

Science at the bar: reducing fear and myths about bats

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Abstract. The work of demystifying bats for society in general is necessary because these animals are important for natural ecosystems and urban spaces. There are various global outreach initiatives that engage with the population in more relaxed environments, such as the city's night bars. Our laboratory conducts outreach work with bats every year, thereby fulfilling an important stage of research activities, which is to provide quality scientific information to the population. Generally, in all our actions, there is always a lot of engagement from people who are keen to learn more about bats, which makes our university extension activity a success.

Keywords: Pint of Science; Latin American and Caribbean Bat Day; Outreach; Biodiversity; Mato Grosso

Aim and improvement proposal

Bats are essential for they provide the ecosystem services, such as pollination, seed dispersal, and control of agricultural pests (Aguilar et al., 2021; Ancillotto et al., 2024; Araújo et al., 2022; Augusto et al., 2024; Flores-Abreu et al., 2019; Trejo-Salazar et al., 2023; Tuneu-Corral et al., 2024). Despite that, the cultural relationship between humans and bats, and it has always brought up curiosity, fear and disgust. Human societies, throughout history, see bats as Gods, demons, omen of good or bad luck, cursed or poisoned animals (Grant, 1999; Teixeira; Papavero, 2012). This reputation stems from the fact that bats are nocturnal animals and, through the myth that all bats drink blood, which generates a detrimental mythology, and the SARS-CoV-2 pandemic has worsened this scenario (Temmam et al., 2022). Although the origin of the coronavirus is still not fully understood (Pekar et al., 2022), bats cannot be blamed for this.

Diagnosis and initial parameter

Since bats are important elements for the native fauna, as well as synanthropic fauna, the information diffusion processes to civil society without academic training should be considered a

conservative action for bats. It is essential that people receive qualified information about bats, as some journalistic media outlets generally resort to sensationalism when producing articles based on academic results published in scientific journals, thus harming civil society by reporting inaccurate information. To minimize these misconceptions, the Neotropical Chiropterology Laboratory at the Federal University of Mato Grosso in Sinop-MT carries out scientific outreach activities about bats on several fronts. Sinop is a Brazilian municipality in the southern Amazon undergoing fast urban expansion driven by agriculture, encroaching heavily on native areas. This region is known as the "Arc of Deforestation" (Fearnside, 2005), and these anthropogenic actions can lead local human populations to more frequently meet species of wild fauna, as well as with synanthropic fauna.

Results and discussion

The "ICNHS in Action" is one of the activities carried out by the faculty of the Institute of Natural, Human and Social Sciences of the Federal University of Mato Grosso (11°50'53"S, 55°38'57"W). In the "ICNHS in Action" project, the faculty have the freedom to design the work methodology. The group decided to organize an

awareness-raising action about the importance of bats in a bar in Sinop-MT. The Xingu bar was chosen (Figure 1) because it is an establishment dedicated to disseminating all the cultural initiatives of the city of Sinop (Mato Grosso, Brazil), and therefore hosted the "Night of the Bats" event in 2022, 2023, and 2024, always on a Saturday night close to October 1st (International Bat Day). At that time in the bar, the members of the laboratory interacted directly with people who happened to be in the establishment, where they encountered a table with bat specimens displayed and preserved in alcohol. These specimens are part of the BatLab's didactic collection (Figure 1), and were displayed in a way that allowed people to see the animals and perceive differences between the species, always mediated by a member of the laboratory. In addition, banners with general information about bats were always set up at the location, as well as QR codes with all the virtual links of BatLab for scientific divulgation. The methodology is simplified precisely to make it more attractive to the customers, given that the bar's musical attractions can be a source of distraction for people.

Another initiative in which BatLab participated in 2023 was the "Pint of Science" (<https://pintofscience.com.br/>), with a lecture on bats (Figure 2). This event is a global initiative to bring scientists to bars in urban centers with the aim of showing to civil society the work developed within universities, which people often do not have access to. This action took place at the Mestre Cervejeiro bar, and unlike the previous action, in the "Pint of Science" people already know that the event will take place, and they go to the bars to listen to the scientists' lectures. For this action, we also set up a contact station with the members of BatLab after a general lecture on bats given by the laboratory

coordinator (Figure 2). Bringing science closer to the bar helps to deconstruct the serious image that the media usually builds about scientists and how scientists work, which distances civil society from trying to understand academic workings and the benefits associated with them. A more relaxed environment offers the opportunity for the complexity of some projects developed in educational and research institutions to reach civil society much more effectively. Science outreach initiatives should promote the democratization of knowledge in various public domains, and one of the best actions on a global scale is the universalization of science using urban bars as a vehicle.

The goal of our outreach activities in bars in the city of Sinop-MT was to demystify bats, as well as show the population their importance in urban environments and natural ecosystems. BatLab carries out these outreach activities close to International Bat Day in bars in Sinop dedicated to the local cultural movement, always with massive participation from bar customers at our outreach station. These activities bring us satisfaction, as there has never been any aversion to the fact that bats are being displayed. In fact, there was even some curiosity from people about common myths about bats, such as "all bats suck blood" or "bats are old rats." Therefore, it is important for scientists to always balance research activities with science outreach activities, because when done correctly, it is a powerful tool for environmental education. Additionally, not all universities dedicate effort to creating environmental education spaces to attract the population to the institution in search of this type of information. In Sinop, UFMT is seeking to change this reality, aiming to create environments to welcome schools, as well as the general population.



Figure 1. Extension activity of the Neotropical Chiropterology Laboratory in the years (A-B) 2022, (C-D) 2023, and (E-F) 2024, at the Xingu bar in the city of Sinop-MT.

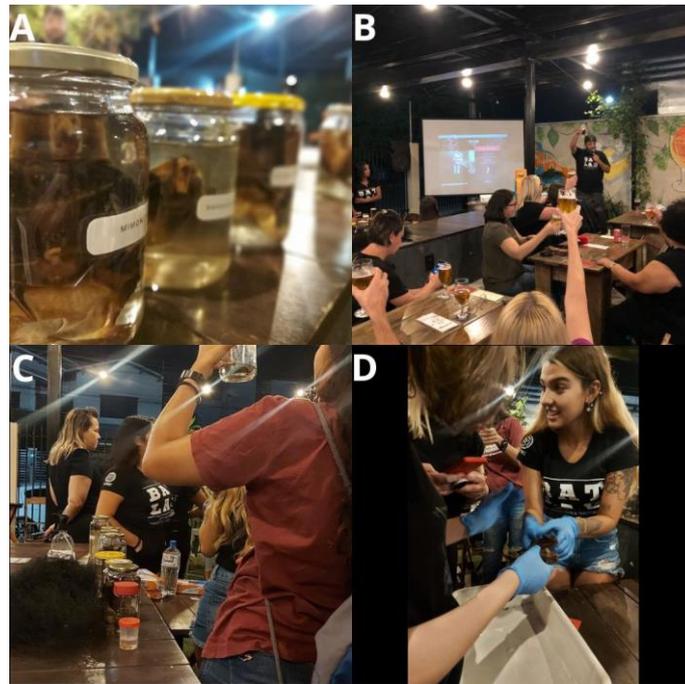


Figure 2. Lecture at the "Pint of Science" in 2023 at the Mestre Cervejeiro bar in the city of Sinop-MT (B). After the presentation, the team attended to the audience (A, C), showing the bats in detail (D).

Conclusion

Currently, it is a fundamental task to improve the understanding and communication of the relevance of bats to society (Cerri *et al.*, 2022; Lu *et al.*, 2021; Nanni *et al.*, 2022), mainly to extinguish the bats' bad reputation, also derived from the erroneous perception about them (Boso *et al.*, 2021; Oliveira; Boccardo, 2015). The initiative to work on scientific dissemination in a bar is very beneficial, as it removes the weight of formality from the presentation of the work, and we can make the public empathize with academic products, and in our particular case with bat biology.

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