

# SOME BATS ARE HERE: REDUCING THE WALLACEAN SHORTFALL OF BATS IN THE AMAZON

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## Abstract

**Aim:** The Amazon rainforest has approximately 23% of its sampled area dedicated to bats, making it one of the least sampled and most diverse regions for bats in Brazil. The lack of sampling results in a lack of knowledge regarding the accurate geographical distribution of bat species. This lack is referred to as the Wallacean shortfall, which should be addressed with primary data obtained from in situ collections. However, the use of Species Distribution Models (SDMs) can help alleviate this gap. **Location:** The states of Pará and Acre are located in the Brazilian Amazon. **Methods:** So, our objective is to decrease the Wallacean shortfall concerning Amazonian bat species. To achieve this, we provide (i) a list of bat species sampled in the states of Pará and Acre in the last five years (2017 to 2022); (ii) the potential distribution of species considered as new occurrences for the region; and (iii) the potential distribution of species classified as Data Deficient (DD) and Near Threatened (NT) according to the IUCN classification. **Results:** With 96 nights of collection and 129,600 m<sup>2</sup>h of mist netting, we obtained 75 bat species, with an estimated total of 94.78 species. Additionally, 21 species were considered as range extensions. **Main conclusions:** The Brazilian Amazon region has a vast geographic expanse and few established research centers, resulting in a limited sampling of bats and other biological groups. Furthermore, we draw attention to the significant number of bat species with expanded geographical distributions, with 21 out of the 75 sampled species. This should be a reminder that primary biogeographic data is still necessary for the neotropical region.

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