

Project Update: May 2019

Activities

From January to December 2018, the Cueva San Francisco (CSF) was visited monthly. Mist nets (12 x 2.6 m) have been placed outside the cave for capture of bats. The identification of the bats is done based on the key of identification Medellín et al. (2008) and in the experience of the collector.

Each Mexican free tailed bat (*Tadarida brasiliensis mexicana*) is weighed and measured morphological variables (length of the forearm, length of the third and fifth fingers, of both wings). Later the bats are released near the entrance of the cave. The capture and procedures are carried out in accordance with the guidelines approved by the American Society of Mammalogists (Sikes et al. 2016).

From January 2018 to April 2019 five species of bats have been reported in the CSF: *Artibeus jamaicensis*, *Eptesicus fuscus*, *Pteronotus parnellii*, *Uroderma bilobatum* and *T. b. mexicana*. The Mexican free-tailed bat has been present during all the sampling months and 1598 individuals have been captured.

According to what was observed in the size and population structure of *T. b. mexicana*, it is hypothesized that these bats are represented by at least two population groups (Figure 1) that occupy the CSF in short periods. These groups could present apparently regional or short distance movements. However, it would be necessary to continue with the monitoring of the bats in the CSF, for at least a few more months, and to test this hypothesis with the genetic analyses.

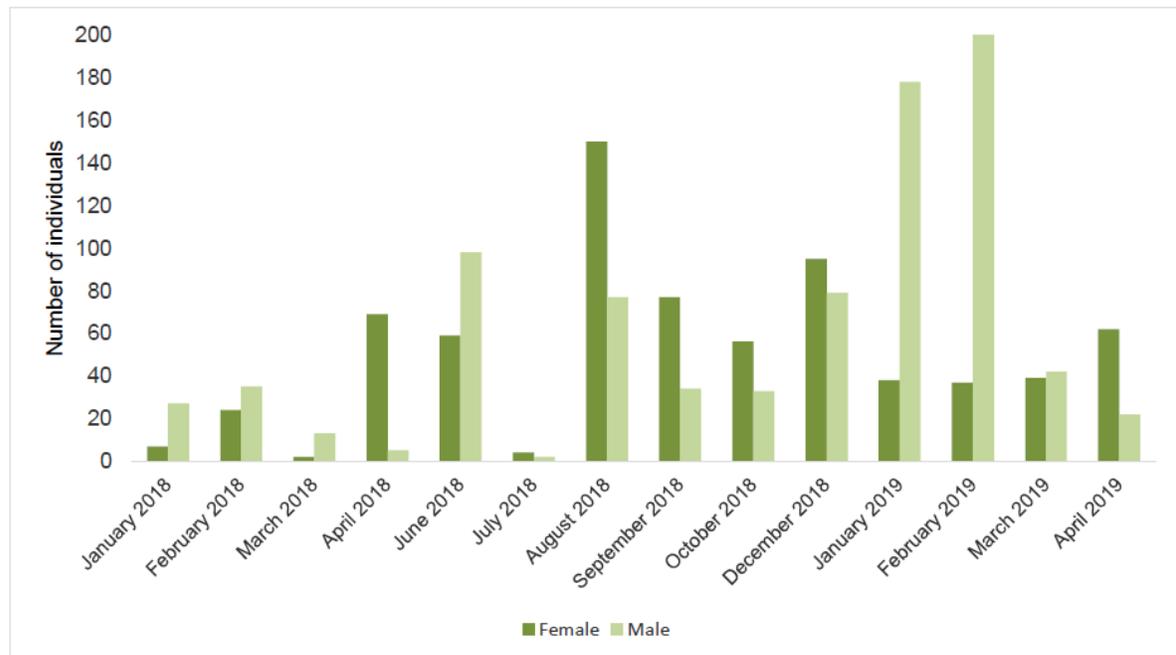


Figura 1. Number of females and males of *Tadarida brasiliensis Mexicana* captured in the Cueva San Francisco, Chiapas.

Difficulties

It has been difficult for us to find the financing to start with the genetic analyses, however we continue in the search.

The quality of night vision cameras has not allowed obtaining the necessary videos to estimate the population size of *T. b. mexicana*, despite using two infrared cameras and infrared illuminators. The low budget of the project does not allow to appropriate of more specialised cameras (thermal), for the high cost of these. We will look for ways to make estimates of population size, based on field observations (e.g. duration of emergence of CSF bats).