

Project Update: September 2018

Activities

Since January 2018 we have made monthly visits (prospective) to the Cueva San Francisco (CSF), to conduct pilot sampling and assess the theoretical and methodological feasibility of the project. Starting from May 2018, the project officially started, thanks to the support granted by The Rufford Foundation.

During the sampling months it has been observed that the population size of *Tadarida brasiliensis mexicana* has fluctuated from thousands of individuals to just a few, and we are detecting two migratory periods in which the guano bat is almost completely absent from CSF. Likewise, the proportion of sex varies monthly, suggesting that both females and males migrate. We have found significant differences in body mass and some measurement indexes of wing morphology, which suggest that some traits of bats are modified by migration.

The tropical cacomistle *Bassariscus sumichrasti* has been observed climbing the outer wall of the CSF to feed on some birds, and it lives in the surrounding vegetation of the CSF. The tropical cacomistle is in Special Protection (Pr), in accordance with the Norma Oficial Mexicana (NOM-059-SEMARNAT-2010). This gives it one more important point for a better management of the CSF and the conservation of its fauna.

Difficulties

We have had difficulty estimating (in specific numbers) the population size of *T. b. mexicana*, because we are using a video camera night vision to perform the analysis, adjusting with night vision illuminators. We have ruled out the use of a thermal video camera (as had been suggested at the beginning) due to its high cost, and we have not found the financing for it. Likewise, it has been difficult for us to find the financing to start with the genetic analyses, however we continue in the search.