Project Update: August 2019

Field work.
Field work was carried out during the summer 2018, obtaining 180 bat samples, and approximately 1040 ectoparasites. We visited 18 localities across the Baja California peninsula, including three key sites that were in two states in continent, which will allow us to investigate if there is any trace of current or past gene flow between *Myotis* bats between these sites.

For the survey, two master students (from the University of Leeds) were working in their dissertation along with my data collection (Fig. 1). A volunteer from Mexico joined the survey as well. My PhD supervisor joined for three weeks. We started out long journey in the South of the Baja California peninsula travelling all along, and finished up in Jalisco state.

Figure 1. Setting up the mist nets over a water repository.

There were some eventualities during the field work that I will describe at the final project report that I will submit by the end of my PhD. Budget was exceeded due to several malfunctions from the fieldwork truck and other emergencies.

Project preliminary results.
In total, for the whole project, we have 620 bat samples comprising 26 bat species along 26 sites, in three years of sampling. From these samples, we sampled 288 *Myotis* bats, including at least seven different species. The 2018 field work season was crucial for obtaining data of *M. velifer*, important part of the PhD project (Fig. 2).

Figure 2. The Cave bat (*M. velifer*) in Sonora, México.

Lab work for sequencing the cytochrome *b* gene and the ddRAD libraries for the population genetics analysis with this *Myotis* complex is already finished. Currently, sequence analysis is being carried out. So far, there are several interesting findings regarding their taxonomy. Nice results are expected from these data after analysis completion.

Ectoparasites survey was an important part of the project, essential for the bat's fitness and health and to understand how environmental and ecological factor may influence ectoparasite composition and distribution. They are also important as vectors from other pathogens that can be potentially affect at and human wellbeing. We collected a total of 1988 ectoparasites (Fig. 2) along 16 species of bat. The "non-identified" portion comprises chiggers, mites and ticks larvae, which will not be included in the current work.

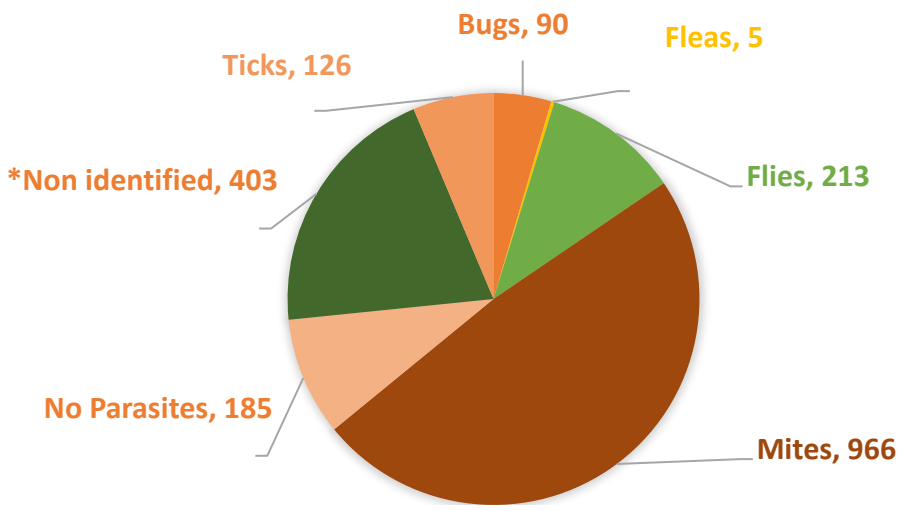

Figure 3. Number of ectoparasites collected during two field work seasons in the Baja California peninsula, Mexico.

Final report submission.

I will have to submit my thesis by 29th of February 2020. Therefore, if possible, I would like to submit my final report in March, 2020. This work has been presented in one international conference so far (IBRC2019 in Thailand) and it is planned to be presented in more. I am very thankful by the grant you provided me, as well as the many you provide to other students. Please advise me if you need a wider update of the project, since I am aware I did not describe all in detail, to do so for the final report. Thank you.