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Ecology of Dominican Bats

The island of Dominica has a diverse population of bats. We aspired to perform an ecological study on the bats of Springfield. Our foci included species diversity, habits of *Tadarida brasiliensis* and *Molossus molossus*, and ectoparasite relationships. We wanted our study to be thorough and efficient with a minimal impact on the bats. Consequently, no anesthetization or euthenization was performed as in some sampling practices. Our handling methods enabled us to successfully release all of our captures. Along with our individual studies we also removed tissue samples from the wing membrane from both genders of each species. The samples were sent to Dr. Honeycutt at Texas A&M University for an mtDNA study.

There are twelve bat species found in Dominica, and a study was done by Cary Labrenz to determine the species diversity of bats in the Springfield area. We set up mist nets at Mount Joy, the Bee House, Check Hall Stream, the Streamhouse, and the Dining Hall. The nets were set up during the day and then dropped at dusk to catch bats. All bats caught were removed from the net and identified by characteristics such as size, color, nose type, and tail. The data recorded was analyzed to see what species of bats were present in different areas around Springfield.

A study of *Tadarida brasiliensis* and *Molossus molossus* was performed by Natalie Holzen and Jana Mullinax. A colony of each species was observed, and on one occasion members of the *M. molossus* colony were netted. Observations and data collected include echolocation frequencies emitted, foraging times, flight patterns, and determination of sexual dimorphism.

A separate study on ectoparasites was conducted by Alyssa Kubiak and Laurie Warriner. As bats entered the net, parasites were removed with combs, brushes, tweezers, and aspirators. Body region preferences, as well as differences in parasite species between bat species were described. All samples were analyzed, and six species of ectoparasites were discovered.

All research was conducted over an eight night period, beginning on Sunday, May 24 and ending on Tuesday, June 2. Results from all information obtained is detailed in the proceeding individual reports. Future projects concerning Dominican bats should take into account the number of people necessary to remove bats while mist-netting. If nets are worked simultaneously, they should be in close proximity, and adequate help should be available.