Listening for Differences: Analyzing Bat Feeding Behavior

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In South Carolina there have been very few studies examining the behavior of the resident bats. This project tests the hypothesis that the coastal evening bats (Nycticeius humeralis), eastern red bats (Lasiurus borealis), hoary bats (Lasiurus cinereus), and big brown bats (Eptesicus fuscus) occupy different temporal niches in their foraging activity. Nearly every night from October 1, 2016 to December 31, 2016 (79 nights total), a Titley Scientific Anabat Express bat detector was utilized to record the calls of the bats. Recordings were identified to species by using EchoClass, a program developed by the US Army Corps of Engineers for the US Fish and Wildlife Service. Python 3.5 was utilized by the investigator to organize and analyze the EchoClass data. The results show the temporal niches that the four local bat species use in feeding behavior. In addition, it was found that there are three peaks in big brown bat activity in the hours after sunset; this differs from the findings of studies in other locations that are accepted as accurate for the local bat population.

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