



DETERMINING BAT SPECIES VIA FORAGING CALL CHARACTERISTICS WITHIN LOWNDES COUNTY, GEORGIA

Trevor Haskins, Biology
Valdosta State University

Sponsor: Dr. Bradley Bergstrom, Biology

Abstract:

The state of Georgia is home to fifteen species of microbat, members of the suborder Microchiroptera. These bats use echolocation pulses from their larynx to identify their surroundings and potential prey. Through the use of Wildlife Acoustic's Echo Meter 2 attachment for smart phone devices, foraging calls were recorded and later identified with Kaleidoscope software ver. 5.19h. Seven out of the fifteen Microchiropteran species within Georgia were identified based on foraging call characteristics.

Discussion:

Seven bat species were identified via manual identification methods with established call characteristic libraries. The most common bat identified was the Mexican Free-tailed bat, *Tadarida brasiliensis*. Issues did arise with the Wildlife Acoustics automatic identification feature. Some foraging call recordings were automatically identified as species not typically found within Lowndes County. These species included the Silver Haired bat.

Methods and Results:

The Echo Meter 2 attachment from Wildlife Acoustics was used to record foraging calls over multiple nights. These recordings were run through Kaleidoscope ver. 5.19h for accurate species identification. This table lists the instances each bat species was recorded at a single survey site in Hahira, Georgia.

	10/25/2019	11/27/2019	11/30/2019	Total
<i>Tadarida brasiliensis</i>	0	0	17	17
<i>Lasiurus cinereus</i>	2	1	10	13
<i>Perimyotis subflavus</i>	0	0	11	11
<i>Myotis austroriparius</i>	0	0	9	9
<i>Myotis grisescens</i>	0	0	2	2
<i>Nycticeius humeralis</i>	0	0	2	2
<i>Eptesicus fuscus</i>	0	0	1	1
Total	2	1	52	55

Images:

To the left are two foraging call recordings depicting *Myotis austroriparius*. The images below depict the bats found in this study. From left to right, *Lasiurus cinereus*¹, *Myotis austroriparius*², *Perimyotis subflavus*³, *Tadarida brasiliensis*⁴, *Eptesicus fuscus*⁵, *Myotis grisescens*⁶, and *Nycticeius humeralis*⁷.

