

BIOACOUSTIC STUDY OF INSECTIVOROUS BATS



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The microbat has developed advanced echolocating ability compared to the megabats or old-world fruit bats that relies mainly on vision and olfaction for food hunting. The microbats orient and capture their prey by means of echolocation that involves ultrasonic calls $>20\text{kHz}$, in which a frequency beyond the range of human hearing. Their morphological features and echolocation calls are designed in correlate with their adaptability with the environment especially with their superiority maneuver, detection and localize targeted object in cluttered environment. In Borneo, there are a total of 100 bats' species with 85 species from Sarawak (15 Megabats and 70 echolocating microbats). The use of ultrasonic detectors in monitoring echolocation calls by using bat detectors has surged the researchers' interest to study on bats and their habitat relationship as well as addressing questions concerning their activity patterns despite the limitations in this method. Present study intends to build a call library comprising of different species call frequencies as well as bat activity patterns in Kubah National Park via acoustic measures. To date, higher elevations recorded the highest activity that is determined by the number of passes but lower by species richness as compared to the lower elevation. Acoustic monitoring provides additional data of bat species that occur at each elevation that were not caught during trapping. These data will be highly useful in studying effect of landscape changes in the future.



Portrait of Woolly Horseshoe Bat (*Rhinolophus luctus*)



Microphone of SM2 extended on a tree

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