Lend an ear – using the Audiomoth to detect ultrasonic activity of at-risk bat species

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The Audiomoth has become one of the leading devices on the market for acoustic monitoring of wildlife due to its affordability, portability, easy of use and ability to monitor multiple taxa. The Audiomoth is most often used to study birds in Atlantic Canada but could potentially provide a more accessible option for community science monitoring of bats. Popular bat acoustic monitoring devices are often expensive while detecting bats can be more challenging than other taxa, as they emit vocalizations above the human hearing range while on the wing. We explored the performance of the Audiomoth in detecting ultrasonic activity of Nova Scotia bat species and optimized its settings for bat detection next to the leading brand of bat detector. We compared the number of recordings per species or genus over nine nights in December 2020 and in August 2021 between all devices. We found the Audiomoth performed well in detecting bat activity across nights using a medium gain and higher amplitude threshold (512) but generally detected less activity each night compared to Wildlife Acoustics equipment (Song Meter SM4BAT FS, Mini Bat). The Audiomoth can be used successfully to monitor for bats, while fine tuning the settings allows the user to better target bat calls. Users should stay up to date on the latest firmware updates and recommendations while more work is needed to simplify the analysis and identification of recordings to species.

Keywords: Bats, Little brown myotis, Audiomoth, monitoring

Presentation type: poster

Commented [JK1]: I don't think this is true globally but probably so in Atlantic Canada. I would leave this sentence out.