
MONTANA'S BAT ACOUSTIC SURVEILLANCE EFFORTS: AN UPDATE (POSTER)

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Montana's bat species face a wide array of conservation issues that threaten their long-term viability. A collaborative effort was initiated in 2011 to document year-round activity patterns of Montana's bats prior to the arrival of White-nose Syndrome as mortality has exceeded 95% for some bat populations effected by this disease in eastern North America. In the last 5 years, we have deployed a network of over 76 Song Meter ultrasonic acoustic detector/recorder stations programmed to record bat passes from sunset to sunrise year-round. Through late December 2015, these recording stations have resulted in more than 7.2 million full spectrum sound files containing nearly 13 terabytes of information. Processing and automated analyses have been completed for all sound files and over 43,000 bat passes have been reviewed by hand using an updated Montana bat call characteristics key to definitively confirm the presence of species during each month of the year, identify the lowest temperatures at which individual bat species are active, and track overall bat activity, regardless of species, at each station. Highlights to-date include: 2,104 new records of monthly species presence in various landscapes across the region, numerous first records of species' activity during the fall, winter, and spring months, numerous first records of species in regions with previously limited survey effort, documentation of nightly activity patterns throughout the year, regular winter activity for a few resident species, the year-round presence of species previously considered migratory, and exciting patterns of activity relative to temperature, wind speed, barometric pressure, and moonlight.