
MONTANA'S BAT ACOUSTIC SURVEILLANCE EFFORTS: PRE-WHITE-NOSE SYNDROME (ORAL PRESENTATION AND POSTER)

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Montana's bat species face a wide array of conservation issues that threaten the long-term viability of these populations. The potential arrival of White-Nose Syndrome (WNS) may be the single greatest threat as mortality has exceeded 95% for some bat populations in eastern North America. A collaborative effort was initiated in 2011 to document year-round spatial and temporal activity patterns of Montana's bats prior to WNS arrival. In the last 4 years, we have deployed a network of over 60 Song Meter ultrasonic acoustic detector/recorder stations programmed to record bat passes from sunset to sunrise year-round. Through late December of 2014, these recording stations have resulted in more than 3.9 million full spectrum sound files containing more than 12.5 terabytes of information. Processing and automated analyses have been completed for all sound files and over 30,000 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: 1421 new records of monthly species presence throughout the state, numerous first records of species' activity during the fall, winter, and spring months, numerous first records of species in regions with previously limited bat survey effort, documentation of nightly activity patterns throughout the year and regular winter activity for a few resident species, and the year-round presence of species previously considered migratory.