

Summer Colony Count Efforts for Bats in Montana

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White-nose syndrome (WNS), the disease caused by the cold-adapted fungus, (*Pseudogymnoascus destructans*) (Pd), has killed millions of North American bats since its detection in New York in 2006. To assess spread and impact on Montana's bat populations, partners in Montana began collaborating on a project in 2019 involving annual, statewide surveillance for Pd and WNS to estimate the distribution of the fungus and disease, coupled with annual acoustic monitoring and colony counts to assess bat occupancy and activity. Although winter colony counts allow us to monitor population trends in relation to WNS, they are not feasible at a statewide scale in Montana due to logistical constraints around identifying and accessing hibernacula. Therefore, FWP expanded a pilot project in 2023 to conduct summer colony counts at maternity roosts, including bat boxes, buildings, and bridges. This effort involved agency staff, partners, and volunteers who were asked to conduct at least two colony counts during each sampling period at a given roost. Over 60 people participated at 22 maternity roosts across the state. Results from 2023 and 2024 provide baseline data on accessible maternity roosts in Montana and will be used to bolster existing models. Summer colony count data will be used in tandem with those collected via acoustic and disease monitoring to identify areas of highest conservation value for bat management efforts in the state. Future efforts include identifying maternity roosts in eastern Montana, where known bat roosts are sparse, and using DNA metabarcoding to confirm species present at each roost.