Assessing the Presence and Impacts of White-nose Syndrome on Montana's Bat Populations through Disease Surveillance and Long-term Acoustic Monitoring

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White-nose Syndrome (WNS) is a disease that is devastating bat populations in the eastern US. It is caused by the fungus *Pseudogymnoascus destructans* (Pd), which colonizes the bat's skin during hibernation. In 2019, Montana Fish, Wildlife and Parks (MFWP) designed a plan to address the question of how the invasion and spread of WNS might affect the occupancy and activity (as an index of abundance) of bats across Montana. This project involves (1) surveillance for Pd and WNS and (2) long-term acoustic monitoring, compatible with the North American Bat Program. Understanding the distribution and impacts of WNS on Montana's bat populations will directly inform decisions about how aggressively Montana pursues bat management and conservation strategies—whether it be treatments specific to WNS, ecological approaches towards bolstering the health of our existing populations to improve their survival in the face of WNS, additional public outreach and education, or how we structure management to conserve habitat and mitigate other sources of mortality such as that from wind development. In 2020, the fungus that causes WNS was detected in eastern Montana and the first year of acoustic monitoring was completed with the placement of detectors at 87 sites across the state. Preliminary results indicate success of our methods and the need for continued effort. MFWP is looking for partners and volunteers to assist with the collection of bat guano at spring roost sites for disease surveillance in April and May as well as help with acoustic monitoring in June and July.