DOCUMENTING BASELINE WINTER ACTIVITY LEVELS OF BATS IN MONTANA WITH ACOUSTIC MONITORING

Nathan A. Schwab*, ABR, Inc., Missoula, Montana 59802

We deployed acoustic monitoring stations at 3 locations (Lewis & Clark Caverns, Toeckes Cave, and McDonald Mine) in Montana from January through mid-May, 2011. The goal of this monitoring effort was to document winter base-line activity data to potentially use acoustic monitoring as a surveillance tool for White-nose syndrome (WNS). Each monitoring station was equipped with an Anabat detector, temperature data logger, and solar panel array to allow long-term, remote monitoring. The monitoring stations recorded bat activity (bat passes) and temperature outside of hibernacula. External monitoring minimized potential human disturbance to the hibernating bats or any potential spread of Geomyces destructans, the fungus responsible for WNS. Studies conducted by Bat Conservation International at White-nose syndrome affected hibernacula in the eastern U.S., have shown dramatic increases in activity levels at WNS vs. non-infected WNS sites during the hibernation period. If this pattern also holds true in the western U.S., documenting pre-WNS baseline activity levels may allow for acoustic monitoring as a surveillance tool for potential spread of WNS.