Glacier National Park Bat Inventory and Monitoring Project

Lisa J. Bate,* Glacier National Park, West Glacier, Montana 59921
Cori Lausen PhD, Birchdale Ecological, Ltd. Kaslo, B.C. Canada

Prior to 2011, no formal bat surveys had been conducted in Glacier National Park (GNP). Given concerns about high bat mortalities due to the continual spread of white-nose syndrome (WNS) and placement of wind energy facilities, it was critical to learn about GNP's bat diversity, abundance, and distributions before these risks could potentially impact our populations. Of the 11 potential species in GNP, six are Montana (or potential) species of concern. Three years of surveys have now been completed. Survey techniques included mist-netting, acoustic surveys, bridge, building, and cave inspections. To date, we have mist-netted bats over 44 nights in 24 sample units (grid cells-each unit 10 km^2) in GNP, processing a total of 700 individuals. Results indicated no sign of WNS. In addition, we conducted nighttime acoustic surveys at 97 different locations within 31 grid cells. Thus far, we have confirmed nine different bat species throughout the park and added three new bat species to the mammals list for GNP. Acoustic surveys have also confirmed the presence of hibernating bats in the winter. The two most commonly captured bats were the little brown myotis (*Myotis lucifugus*) and the hoary bat (*Lasiurus cinereus*). GNP may be one of the most substantial migratory routes for hoary bats across North America. Plans include continuing with the inventory phase by surveying additional grid cells using both acoustic and visual techniques, and focusing on long-term monitoring using acoustic sampling and systematic and repeatable counts of little brown bat maternity roosts.