

SPECIES OCCURRENCE AND DISTRIBUTION OF BATS IN NORTH CENTRAL MONTANA: RANGE MAP CHANGES RESULTING FROM TWO YEARS OF FIELD SURVEYS^{TWS}

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Bat surveys were conducted in north central Montana, as part of vertebrate species inventories of FWP wildlife management areas in 1998 and 1999. As a group, bats are poorly known in Montana. The most basic biological information on bats (species occurrence, distribution, habitat use) has not been collected in north central Montana. Knowledge of the occurrence and distribution of bats would enable conservation efforts to be initiated, if needed, to protect declining species.

Occurrence records obtained from the Montana Natural Heritage Program in early 1998 included only 26 records from FWP Region 4. Most were museum specimens collected prior to 1970. The purpose of this study was to evaluate Region 4 Wildlife Management Areas and other FWP properties for potential bat use and contribute to knowledge of the species occurrence and distribution of bats in Montana. We captured over 250 bats using mist-nets, identified them to species, and determined forearm length, sex, age, weight, and reproductive status when possible. We documented large range extensions for the fringed myotis (*Myotis thysanodes*), which is a Species of Special Concern and dramatically increased the known occurrences of several other species. Information for some species indicate recent population declines, but for other species we may simply lack information to determine population status. Additional surveys of bats in Montana are needed to fill in these information gaps and get conservation efforts directed where needed most. Conservation actions to reverse population declines are most effective when taken before populations drop to the critical levels that lead to endangered species listing.