
KEEPING COMMON SPECIES COMMON: INVENTORY AND MONITORING FOR A DIVERSITY OF WILDLIFE SPECIES

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Many of the over 500 vertebrate species found in Montana lack formal status assessments. Few monitoring efforts exist for these species and very few are statewide to include public and private lands. In 2008, the Montana Natural Heritage Program and Montana Fish, Wildlife and Parks designed a protocol for simultaneous multi-species survey. We sampled quarter-quadrangle grid cells selected at random over 3 yrs and covered the entire state. We surveyed all lentic sites for amphibians and all south-facing rocky slopes for reptiles within each cell. We also surveyed dominant habitats for bats using acoustic detectors

and small-mammals using standard trap line techniques. The largest challenges included: securing private landowner contact information and permission, automating map creation for the hundreds of selected cells, the preservation of collected specimens, maintaining working acoustic equipment in inclement weather, housing and backing up huge amounts of data from remote locations, and analyzing large quantities of acoustic data. Small mammal and acoustic call identifications are ongoing. A preliminary summary of other data shows an investment of over 20,000 person hours for a total of: 211 grid cells surveyed, 40 small mammal species detected in 2486 captures, 16 bat species detected through thousands of acoustic calls, 12 amphibian species and eight reptile species detected, and 304 species detected as incidental observations. We intend to conduct occupancy modeling for many of the species detected using the grid cells as site. We discuss prospects for using this sampling scheme and methods for future monitoring.