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## **IN-HAND MEASUREMENTS OF ADULT BATS IN THE NORTHERN GREAT PLAINS AND ROCKY MOUNTAINS (POSTER)**

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Researchers rely on keys and other published records of pelage and morphological characteristics to identify bat species in the field. However, these records may not reflect the variability of measurements taken in a field setting, particularly if they are based upon museum specimens or a small number of live individuals. To assist in the identification of

similar bat species, we created a supplement to the “Key to Idaho, Montana, and South Dakota Bats.” We compiled 3,222 records of 11 species of adult bats captured between 1994-2016 in Montana, northern Idaho, and northwestern South Dakota. Using this dataset, we have provided distributions of body measurements as well as insight into the timing of reproduction, parturition, and seasonal body condition for 14 of the 15 species occurring within Montana. Following data analyses, we concluded that: (1) lengths of smaller appendages such as the thumb and tragus show substantial variation, demonstrating that more precise measurements are required; (2) parturition dates appear similar across all species present in the study area, including migratory bats; (3) trends of low body mass in late summer captures may represent older juveniles that are difficult to distinguish from adults by current methods; and (4) we require more data to analyze the traits of species that are infrequently captured. This document will be available on the Montana Natural Heritage Program website ([mtnhp.org](http://mtnhp.org)) to assist researchers in the field.