



BATS

OF MONTANA



Where in your community could a bat live?

Our 15 bat species are diverse and roost in a variety of natural places – this could include trees, snags, stumps, and cliffs. For example, silver-haired bats often roost in tree cavities (holes) created by woodpeckers. Three species in Montana (little brown myotis, Yuma myotis, and big brown bats) form large maternity colonies in human-made structures, such as attics, barns, and bridges. Over time, these populations begin to rely on these human-made structures. Bats also need water to drink, so habitats with water and great roosts are great for bats!

How do we know how many bugs bats eat?

Scientists have tried to answer this question in many ways and have ended up with different answers. For example, one study involved weighing little brown myotis before and after eating to find the weight of the bugs they ate each night. Some scientists have weighed bug parts found in bat poop (guano), while other scientists have watched and recorded how many insects bats eat while flying in the field or even in a lab. Other scientists have even collected guano to look at insect DNA (genetic material you can't even see) to learn about the different types of insects bats are eating.

If humans can't hear echolocation, how do we know bats echolocate?

Our knowledge of wildlife biology and behavior starts with people noticing patterns, asking questions, and using the scientific method. Early scientists learned that bats could still fly around without the use of sight, which told them that bats were using a different sense to navigate – or move around. Later, scientists used basic tools that showed bats make high-frequency sounds. We now have access to affordable equipment we call “bat detectors” that allow us to record these high-frequency sound pulses (echolocation) and then view the sound waves on computers.

And, did you know humans can sometimes hear some species of bats, such as the spotted bat and hoary bat?

Where are the insects in the winter?

Insects are a wildly diverse group of animals, and we do not know much about insect behavior and movements within Montana. Some insects, like monarch butterflies and some crop pests, probably migrate (move away) to avoid colder temperatures and follow food sources. Other species stay in Montana over the winter as eggs, larvae (like the mountain pine beetle), pupae, nymphs, or adults (like bumblebees) by using a strategy called diapause (di-uh-poz). Diapause is a sort of insect “hibernation” where bugs slow down their bodies in response to cold temperatures. Most insect species are not active on the landscape during Montana's winters.