

Bat Facts

Bats are heavy drinkers – they lose up to 30% of their body weight in a day and need to replace this by drinking. They do this by scooping up a drink as they fly over the water's surface.

Baby bats are called "pups". Most of Alberta's bats only have one pup per year and don't start to reproduce until they are 2-3 years old.

Mother bats can carry their pups among roosts and it is not unusual for a bat to use multiple different roosts throughout the breeding season.

All of Alberta's bats are insectivorous. They dine on many agricultural and forestry pests such as gypsy moths, tent caterpillars and cutworms as well as nuisance insects such as flies and mosquitoes. A study in the USA estimated that bats provide \$23 billion in pest control services to the agricultural sector.

Meet Grassland Region Bats

There are eight confirmed species of bats in the grasslands of southern Alberta:

Big Brown Bat (Secure) - one of the most common species on the prairies. Hibernates in Alberta.

Little Brown Myotis (May be at Risk) - formerly known as the Little Brown Bat. Alberta's most common bat but considered May be at Risk in Alberta (and Endangered in Canada) because of their vulnerability to white-nose syndrome. Hibernates in Alberta.

Long-eared Myotis (Secure) - in the Grassland Region they are found primarily in conjunction with riparian areas and nearby badlands. Hibernates in Alberta.

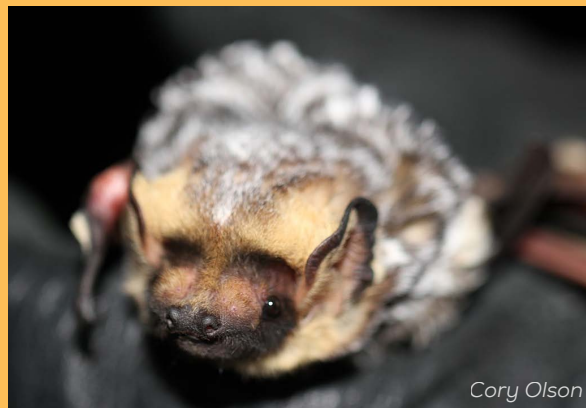
Long-Legged Myotis (Undetermined) - this moth specialist is found in the Milk River and South Saskatchewan watersheds and Rocky Mountains. Hibernates in Alberta.

Western Small-Footed Myotis (Sensitive) - Alberta's smallest bat is restricted to river systems in the Grassland Region (Red Deer, South Saskatchewan, Oldman and Milk). Hibernates in Alberta.

Silver-Haired Bat (Sensitive) - uncommon breeders in river valleys of the Grassland Region. Migratory (leaves Alberta in winter).

Eastern Red Bat (Sensitive) - uncommon, but widely distributed across Alberta. Migratory (leaves Alberta in winter).

Hoary Bat (Secure) - Canada's largest bat; breeds primarily in forested areas, but they pass through southern Alberta during migration. Migratory (leaves Alberta in winter).



Hoary bat - Canada's largest bat



Big brown bat - a common prairie species

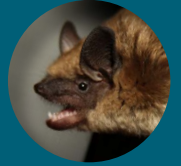
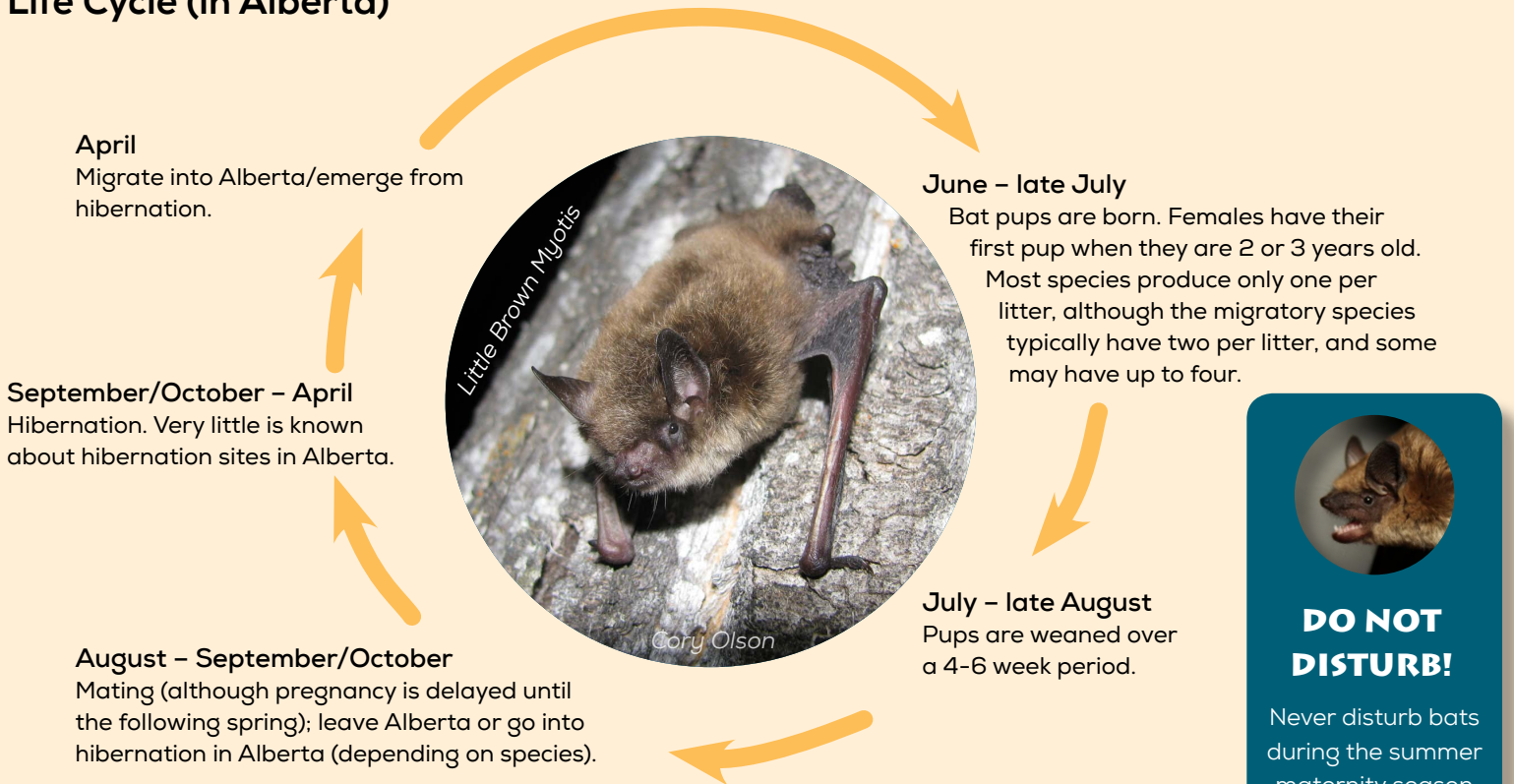


Western small-footed myotis - restricted to river valleys in the grasslands



Long-eared myotis - found in riparian areas and nearby badlands

Life Cycle (in Alberta)



**DO NOT
DISTURB!**

Never disturb bats during the summer maternity season from
April 1st to October 31st



Liz Saunders

Water, flying insects and roosting sites create ideal bat habitat. Riparian forests along prairie rivers are especially important for most of southern Alberta's bats.

Habitat

Bats require:

- Open water for drinking (i.e. lakes, ponds, rivers, troughs).
- Daytime roosts (i.e. trees, tree cavities, rock crevices, buildings). Different species have different roosting requirements.
- Maternity roosts for birthing and raising young (tree cavities, rock crevices, buildings).
- Foraging areas with many flying insects, such as moths, flies and mosquitoes. These are usually wet areas, treed habitats and places protected from the wind.
- Hibernation sites (called hibernacula). These are most often in caves, mines, buildings and deep rock crevices where temperatures remain cool but above freezing through the winter.

The ideal bat habitat is where all of these requirements are found in close proximity. Because of this, the riparian forests along prairie rivers are considered exceptionally important for many bat species.



Cory Olson

Little brown bat roosting site

Beneficial Management Practices for Bats

Grazed Land

Moderate grazing can benefit bats by attracting insect prey and by creating more complex vegetation structure and diversity (which may attract more insects). Intensive grazing may reduce insect diversity and numbers.

In the Grassland Region, riparian forests are the primary roosting habitat for tree bats, therefore it is especially important to manage these forests to ensure seedling establishment and long-term maintenance of the forest.

Specifically, in cottonwood forests and other riparian habitats:

- Promote tree establishment and vigorous plant growth by setting conservative utilization rates (25-65%).
- Locate salt and minerals away from water bodies to force cattle to use more of the range and reduce the time spent in riparian areas.
- Provide alternative watering sites such as troughs and dugouts in upland areas to reduce the impact of cattle in riparian areas.
- Allow sufficient periods of rest for riparian areas. It may take several years of rest to regenerate new cottonwood trees.
- Avoid grazing riparian areas during the spring when soils and stream banks are more susceptible to damage and in the fall when woody vegetation is most vulnerable to browsing.
- Consider fencing out select riparian areas from grazing altogether.
- For more detailed information on grazing management in riparian areas see www.cowsandfish.org.

Avoid using barbed wire near aquatic habitats, especially on the top strand. If possible, keep fences at least 10 m away from open water to reduce the risk of bats getting entangled while swooping to drink.

Discourage cattle movement through rocky and steep slopes where there is potential to damage or disturb roosting bats.

Avoid or minimize use of pesticides, especially near wetlands and riparian areas, as this cuts down on food available for bats.

Provide bat-friendly water sources. While bats use natural water bodies for drinking, they will also drink from watering troughs. This can be hazardous if they fall in and cannot escape or become trapped in barbed wire above the trough. Tire troughs can be particularly perilous. There are a few simple things you can do around your water troughs to minimize the risk to bats:

- Do not place fencing or other obstacles directly above the water (this includes dugouts, ponds and troughs).
- Provide escape options so that bats can climb out if they fall in. This is ideally a rough-textured ramp that intersects the side of the trough.
- Keep the water level high to minimize the distance between the top of the trough and the water surface.

Roosting Sites and Hibernacula

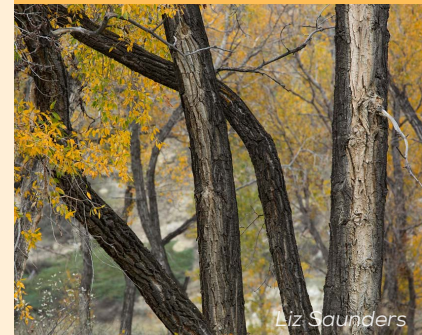
Keep existing trees and plant new trees. Shelterbelts are good for bats and large deciduous trees provide the most benefit. Leave dead trees in place where it is safe to do so. If necessary, dead or decaying trees can be cut to a lower height to minimize safety risks but retain bat roosting sites (>2 m is best). If dead/decaying trees must be removed, this should be done between November and February, when they are less likely to be occupied by bats.

Avoid disturbance and destruction of rocks, boulders, steep slopes and cliffs. Species such as the western small-footed myotis and long-eared myotis often roost close to the ground, making them sensitive to disturbances such as off-road vehicles and land clearing.



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Cottonwood seedlings
= future bat habitat



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Escape ramp from a
watering trough



Cory Olson

Little brown myotis roosting
in a building

Avoid entering mines or caves if bats are present.

Where there are bats roosting in or around buildings, avoid disturbing, trapping or altering the conditions. Do not remove bats from buildings, especially when they are caring for young (April to the end of October).

Install bat houses where naturally occurring roosts have been disturbed or removed. Large multi-chambered bat houses are best (see www.albertabats.ca).

If eviction of bats from a building is necessary, install a large multi-chambered bat house well in advance of the eviction so that bats can become familiar with it. Evictions should be carried out when the young have left the colony (after October 31st). Contact the Alberta Community Bat Program for more information about dealing with bats that have taken up residence in buildings (www.albertabats.ca).

Consider limiting artificial lights around your buildings, as many bats avoid brightly lit areas while roosting or foraging.

Disease Prevention

Any equipment that comes into contact with bats, roosts or hibernacula should be decontaminated to prevent the spread of white-nose syndrome.

If you visit caves in eastern North America, be aware of decontamination protocols and follow disinfection procedures before entering caves in Alberta, to reduce the risk of bringing white-nose syndrome into Alberta. Decontamination protocols can be found at www.whitenosesyndrome.org and www.cwhc-rcsf.ca/docs/WNS_Decontamination_Protocol-Nov2016.pdf

If you find a bat, do not disturb it, especially if the bat is active during the day and acting strangely (it may have rabies). If you have physical contact with a bat in Alberta, contact the Provincial Rabies Hotline at 1-844-427-6847 or Alberta Health Link at 811 or 1-866-408-5465.

Take proper precautions when cleaning attics, sheds and other areas that contain bat and mouse droppings. Spray droppings with a 1:10 bleach and water solution to contain dust and kill fungi and viruses before removing them. Appropriate respiratory equipment should be worn. Additional information on dealing with bat droppings can be found in this booklet - www.bcbats.ca/index.php/bat-basics/bats-and-human-health.

Contribute to Knowledge about Bats

How you can help: Report observations of bats, roosts, hibernation sites and bat mortality to the Alberta Community Bat Program (www.albertabats.ca). The biology, distribution and habitat use of Alberta's bats is still poorly known, making observations from individuals highly valuable.

Development/Industry

Review applicable regulations and guidelines related to bats when wind energy projects are being considered. Direct wind energy developments away from river valleys and other important bat habitats.

Avoid water diversion projects that alter natural river flows and reduce the regeneration of cottonwood trees.



Cory Olson

Consider installing bat houses to attract bats to your property



Liz Saunders

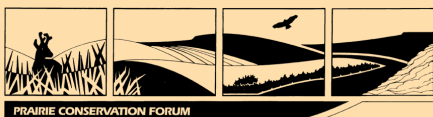
Bat droppings are more crumbly than mouse droppings and they contain many insect fragments



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Conserving Alberta's Wild Side



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