Cory Olson

Got Bats?

NWT Guide for Managing Bats in Buildings

What's inside this guide

Government of
Northwest Territories

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Introduction

Bats are important in several ecosystems in the Northwest Territories (NWT). Not only do they contribute to local biodiversity, they also benefit people by eating mosquitoes and insect pests that affect forests and gardens.

Buildings and other human-made structures can offer safe shelters for some bat species to roost (rest) in. They can be especially important for bats in the northern boreal forest where there are few large trees suitable for bat roosts, and in areas where large trees with cavities or loose bark have been cut down.

Although buildings can provide good conditions for roosting, bats roosting in buildings are also vulnerable to human-caused disturbance and injury. This guide provides information to help you stay safe around bats that are roosting in your buildings and help bats stay safe around people. By following these guidelines, you can help conserve bats in the NWT.

Bat Facts - Did You Know?

Bats are often misunderstood and sometimes feared. Bats provide people with tremendous benefits and seldom cause a threat to people or animals.

DID YOU KNOW:

- Bat communities are an essential part of a healthy ecosystem.
- All bat species in the NWT eat insects, including forest pests, mosquitoes and other biting flies.
- In the summer, a bat can eat more than half its body weight in insects every night. One Little Brown Myotis can eat 600 mosquitoes an hour.
- Bats are not rodents and, unlike rodents, do not build nests or chew or claw their way into a structure. They take advantage of small cracks and openings on the outside of a building.
- Bats are the only true flying mammals. They hang upside down so they can drop head first to take flight quickly. Many bats have difficulty taking off from the ground and they cannot fly straight up.
- Some NWT bats migrate south for the winter, but at least one species hibernates in the NWT. Bats hibernate in deep rock crevices, caves, mines and occasionally buildings.
- Two bat species found in the NWT are species at risk because of their vulnerability to white-nose syndrome.
- White-nose syndrome is a deadly disease caused by an introduced fungus that is decimating bat populations in eastern North America (see ***www.whitenosesyndrome.org***). In affected areas, some bat populations have declined by more than 90%.
- Bats can live up to 30 years or more. Most bats only produce one pup a year and don't start to reproduce until their second or third year. This makes it very difficult for bats to recover from drastic population declines such as those caused by white-nose syndrome or human caused mortality.
- As white-nose syndrome continues to spread across North America, it becomes even more important to care for and conserve the healthy bats in the NWT.

Sherri and Brock Fenton

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Bats and Human Health

The primary human health concern associated with bats in the NWT is rabies. Humans can contract rabies if they are bitten or scratched by an infected bat. However, only a small percentage of bats have rabies and the risk of exposure to rabies is low if direct handling is avoided.

TO PROTECT YOURSELF FROM RABIES EXPOSURE:

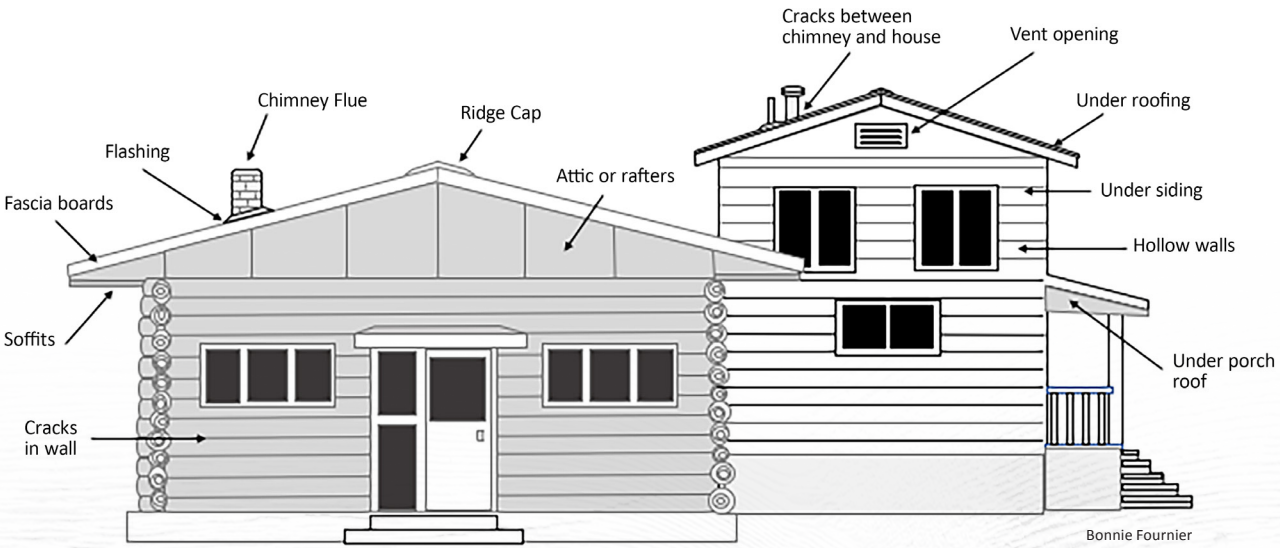
- Make sure bats cannot enter your living space. See page 6 to learn how to do this.
- Avoid directly handling a bat. If you find a bat, alive or dead, use a box or container to capture and remove it. The safe way to do this is shown on page 12.
- If you must handle a bat, **wear thick leather gloves**. Never use your bare hands.
- Bats acting strangely, such as flying during the day, flopping on the ground or showing no fear of humans, may be sick. Avoid the area where the bat is located and keep pets inside. Report it to the regional ENR office. Do not attempt to capture a bat that is acting strangely.
- Discuss rabies vaccination with your regional health authority if you may be handling bats.
- Pets can also contract rabies. Talk with your veterinarian or the NWT SPCA about rabies vaccinations for your pet.
- If you suspect you or your child may have been bitten or scratched by a bat, immediately wash the exposed skin with soap and water for 15 minutes and **seek immediate medical attention from the nursing station or regional health authority.**

If you can safely capture the bat, wear heavy leather gloves and use the method described on page 12. Bring the bat in to your local ENR office or call ENR for assistance.

Cori Lausen

Bats in Buildings – Where to Look

Bats can roost in many parts of a building:



Bonnie Fournier

During the day, bats usually rest in crevices where they are protected from the elements and predators. Crevices may be in attics, cabins, sheds, siding and other enclosed spaces. Day roosts can be used by a single bat or by a maternity colony.

Night roosts are places where bats rest while they are out feeding at night. Many bats use the sides and overhangs of buildings as night roosts, and don't actually enter the building.

Jordi Segers

MATERNITY COLONIES

A maternity colony is a group of female bats raising their young. A maternity colony can range anywhere from two to hundreds of bats and can include pregnant females, nursing females, pups that can't fly yet and young bats that are learning to fly. Some maternity colonies use the same roost all summer long and may come back to the same roost year after year. Protecting maternity colonies is an essential component of bat conservation.

Keeping Bats Out of Your Living Space

There is no need to be concerned if you have bats in your building as long as you can avoid direct contact with them by preventing their entry into human living spaces. This can be done at any time of year by sealing off all the openings between the bat roost and living spaces used by people. As long as the bats cannot enter your living space, they can be left where they are, undisturbed.

STEP 1: LOCATE ALL OPENINGS BETWEEN THE ROOST AND INDOOR LIVING SPACE

Bats often occupy tight crevices and can squeeze into spaces with a diameter as small as 1.3 cm (0.5”). Carefully inspect all possible openings between the roost site and the indoor living space, including:

- attic hatches and doors (including gaps around and under doors)
- chimneys and fireplaces
- spaces around piping or plumbing
- open windows or loose windowsills
- openings around air conditioners, ducts and louver fans
- broken screens and pet doors

STEP 2: SEAL GAPS AND OPENINGS

Seal all gaps and openings with caulking, aerosol foam, weather stripping or screening. Bats can’t chew through any of these sealing materials, but rodents can, so put some steel wool between layers of expanding foam or silicone if these areas are accessible to rodents.

Make sure there is still an outside opening where the bats can exit the roost site.

Bats sometimes enter human living quarters because they fly or climb down a chimney or other chute and can’t climb out. Put screening on the tops of chimneys and other ducts and chutes that lead from the roost site into the house. Chutes should be screened off at the top. Chutes sealed at the bottom may trap bats in the chute with no way out and they will die there. If it is not possible to screen the tops of chutes, provide a rough surfaced ramp inside the chute so bats can crawl up and out.

Once the inside living area is sealed off from the roost site, no further action is usually required and the bats can be left where they are.

Juliet Craig

Excluding Bats

Sometimes it is impossible to seal off human living quarters from a roost site and bats need to be excluded from the building to prevent possible contact with people. Exclusion involves waiting until you are certain there are no bats in the building, then physically blocking the entry and exit points of a roost to prevent future use by bats.

Planning ahead, even by several months, is critical for successful bat exclusion. It is important that bats are not present in the roost when the entrances are sealed off or they will be trapped inside and die. Simply waiting until bats fly out at dusk and blocking the holes is not enough.

The following steps will help ensure bats are not harmed if they need to be excluded from a building.

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STEP 1: TIME YOUR EXCLUSION CAREFULLY

Do not try to exclude bats during the maternity season from May 1 to September 30. Bat pups cannot fly and remain in the roost while mothers forage for insects. Attempts to exclude bats during the maternity season can result in the death of flightless young or other bats trapped inside. Dealing with bat carcasses can be very unpleasant.

Wait until late October or November to exclude bats. Maternity colonies usually leave roosts by the beginning of October so many bats, though not necessarily all, will have left the roost by this time. Choosing the right time to exclude bats is not a guarantee that all bats have left. You still need to check for bats before you begin the exclusion process.

STEP 2: INSTALL A BAT HOUSE BEFORE EXCLUSION

Bat houses can help reduce the negative effects of exclusion on a bat colony by providing a safe, alternate roosting site. Putting up a bat house nearby before you exclude bats is strongly recommended and may prevent bats from trying to re-enter your building.

Bat houses should be erected a few months to a year before you exclude bats from a building to give the bats time to find and explore the new roosting site. Bat houses should be installed close to the original roost to maximize the likelihood of bats finding it.

Similar to birdhouses, bat houses are usually wooden boxes that can be installed on a tall post in your yard or other open area, or on the side of a building. Not all commercially available bat houses are suitable for bats in the NWT. Before you purchase a bat house, or build your own, ensure it meets minimum design requirements.

For plans and installation instructions for bat houses that are appropriate for use in the NWT, visit **https://www.enr.gov.nt.ca/en/services/bats**

STEP 3: IDENTIFY ROOST ENTRY AND EXIT POINTS

Watch the building for an hour after sunset to see where bats are exiting the building. It is best to do this during the summer while there are still lots of bats using the roost. If you wait until fall, you may not see many bats leaving the building. It's helpful to have more than one observer so you can watch all sides of a building.

Once you see where bats are entering and leaving, take a close look to find other openings that bats might use if their current entrance routes are sealed. A bat can enter a crevice as small as 1.3 cm (0.5"). Look for areas of disrepair, such as gaps in siding or flashing in walls or attics.

Inspect your attic during the daytime to see if any daylight is visible through the roof. Entry points can usually be identified on the outside of a building by the presence of yellow or brown stains on the wall below the opening or the presence of bat droppings on the wall or the ground.

STEP 4: INSTALL ONE-WAY EXITS

Before you seal off your building to bats, the use of one-way exits is recommended. These exits allow bats to exit, but not re-enter a roost. See page 10 to learn how to make these.

The best time to use a one-way exit is late fall or early spring before the maternity season. **Do not use one-way exits during the maternity season from May 1 to September 30**. During this time, bat pups cannot fly and remain in the roost while mothers forage for insects. The pups cannot leave the roost on their own and a one-way exit will prevent their mothers from returning to them.

Bats usually leave for the winter, but occasionally some species may stay. If you think bats are staying in your building over winter, providing one-way exits until the following year is recommended.

One-way exits need to be made out of materials that don't have any sharp edges or parts that could damage a bat's wing or form spaces that could trap a bat.

Not all bats exit a building every night, so one-way exits should be left in place for at least five to seven nights in the fall/spring months before they are removed and entrance holes are sealed. These nights should include at least three nights in a row when it is warm and not raining. It is also a good idea to watch the exits from dusk till full dark on the last night before the hole is permanently sealed to make sure no bats remain inside the roost.

A bat pup that cannot fly yet (GNWT)

Paige Erickson-McGee

STEP 5: SEAL THE ROOST TO EXCLUDE BATS FROM BUILDING

Use a flashlight to carefully check any crevices, corners and cracks to see if bats are present. Be sure to check all the areas bats may be using, including all of the locations shown in the diagram on page 5. You should also watch the building for an hour after sunset to see whether any bats are exiting.

Once you are certain all bats have left the building, seal any potential entry points with caulking, aerosol foam, weather stripping or screening. This should be done in early winter to reduce the chance of bats being trapped inside. Inspect the roost site the following year to make sure exclusion was successful.

Cory Olson

Katie Bell

Cory Olson

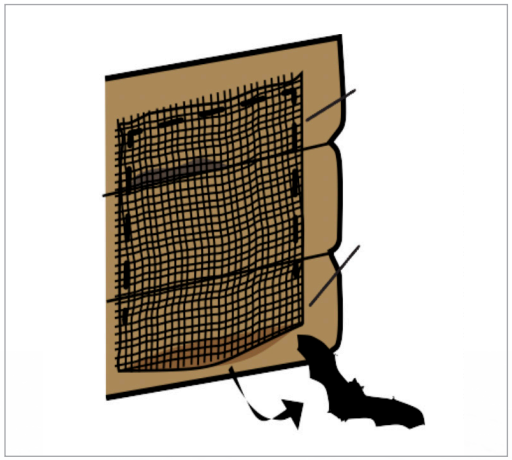
PLANNING RENOVATIONS?

If bats are roosting in a building, they can be accidently harmed or killed if building renovations or repairs are done while they are using the roost.

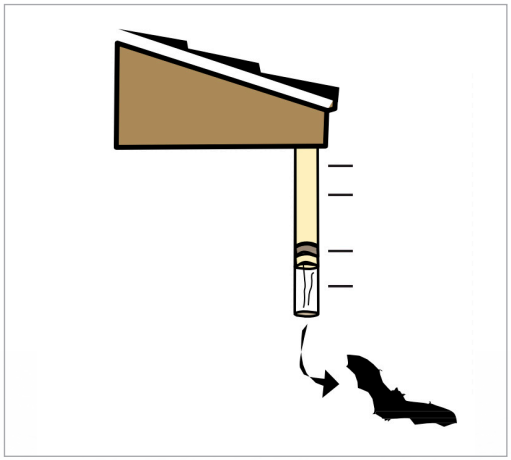
Plan ahead before doing renovations to prevent harming bats. **If you know you have bats roosting in your building, avoid doing renovations during the maternity season from May 1 to September 30.**

If possible, plan your renovations for late fall or winter when bats are not likely to be using the building. If that is not possible, and renovations must be done during the summer, install one way exits in the spring to ensure any bats that overwintered leave the building and cannot re-enter. Prevent returning bats from entering the building in the spring by sealing up entry/exit points before bats arrive in April.

How to Make One-Way Exits



On a Wall or Other Vertical Surface
Place netting with less than 1 cm (1/2”) mesh or a plastic sheet over the entry opening and secure it on three edges. Leave the bottom edge open and let it hang well below the entrance. When bats fly out of the roost site, they will contact the plastic or mesh and slip down past the open bottom edge. However, when they try to fly back inside, they will push against the sheet and not be able to get back in.



On an Overhang or Other Horizontal Surface
Attach one end of a plastic tube at least 5 cm (2”) wide and 25 cm (10”) long over the mouth of the opening. A clear plastic sleeve can be added to the bottom end of the pipe. Bats will be able to exit by sliding down the tube, but they will not be able to re-enter since the tube is too narrow to fly through and too slippery to climb up.

Cory Olson

If You Find A Live Bat In Your House

Do not panic! A bat in your house is there by accident and does not want to hurt you. It will leave on its own if it can find an open window or door. Move quietly and gently so the bat will calm down. The goal is to get the bat into a room where a door or large window without a screen can be opened and it can fly out on its own.

Jordi Segers

- Do not chase the bat with a broom or stick.
- Put dogs or cats into another room and shut the door.
- Close the doors to adjacent rooms. Open the door or window in the chosen room.
- Turn off the ceiling fan, turn off the air conditioner if it is near the open window or door, and turn off outside lights that are near the open door or window.
- Remain quiet and patient until the bat finds its way out.
- If the bat does not leave on its own it can be safely captured and released outside using the method shown on page 12.
- If you have tried these steps and need further assistance, contact your local ENR office.
- If you suspect you or your child may have been bitten or scratched by a bat, immediately wash the exposed skin with soap and water for 15 minutes and **seek immediate medical attention from the nursing station or regional health authority.**

CLEANING UP BAT DROPPINGS

Germs that can cause disease in people can be found in the droppings (poop) of any animal. **When cleaning up any animal droppings, take precautions to avoid inhaling dust and germs.**

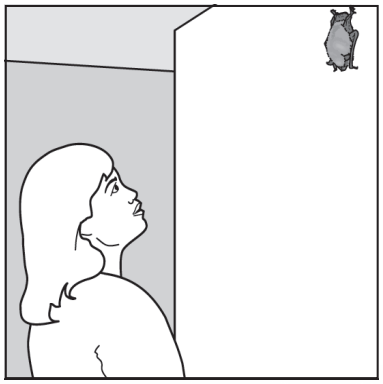
- Wear a respiratory protection mask with class N-100 (high efficiency) particle filters. Make sure the mask fits properly.
- Wear gloves. Disposable nitrile or latex gloves are best, but rubber gloves that can be washed and disinfected will also work.
- Spray down the area with water before cleaning up to reduce dust.
- Spray the area with a diluted (10%) chlorine bleach solution after the droppings have been removed.

These precautions are especially important if you are working in a confined space such as an attic or other enclosed space.

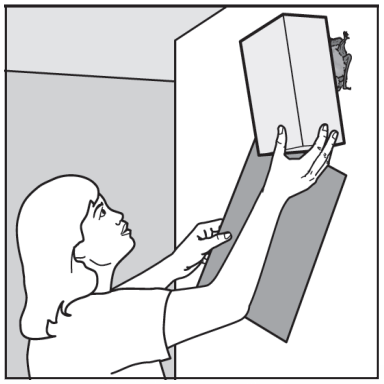
To make the cleanup of bat droppings easier:

- Place a sheet of plastic or plywood below the roost to catch droppings. Do not use a bucket or other container that a bat can fall into unless it has a stick or ramp that allows the bat to crawl out.
- Improve access to the attic or area where bats are roosting to make clean up easier.

Safely Removing a Live Bat



1. Wait quietly until the bat lands.



2. Wearing heavy leather gloves, cover the bat with a small box or other container like a can or yogurt container.

   Gently slip a piece of cardboard or a large envelope between the container and the surface the bat has landed on.

   Be careful that you don't catch any part of the bat between the box and the cardboard.

3. Slowly turn the box over, containing the bat inside.

   Place the container in a quiet, safe place and wait until dark before releasing the bat outdoors.

   If the bat must remain in the box for several hours before you can release it, place a soft cloth (not terry cloth) in the box before securing the cover.

   Most bats are very small and can escape from a container with a loose-fitting lid. Be sure your cover is secure, but not air-tight. Small holes can be made for ventilation.

J. Scott Altenbach and www.batcon.org

4. Most bats need to drop into flight from a height so don't place the container on the ground. Place it on its side so the bat can easily climb out onto a tree limb or a second storey deck etc. Make sure the bat has an open space to take off into, one that is not blocked by tree branches or bushes.

   Watch until the bat flies away.

   If the bat appears unable to fly, contact your local ENR office.

If You Find An Injured Or Distressed Bat

Bats can become injured or stressed for a variety of reasons. In most cases, the best option is to leave the bat alone – it may simply be resting until it can take off again during the night.

Young bats may fall to the ground, or end up in inappropriate locations. If the bat does not look injured, you can use the method shown on page 12 to gently capture the bat with a box or container and release it. Always wear thick leather gloves if you are going to move a bat.

If the bat is still there the following day or appears injured, contact your local ENR office for advice.

If You Find A Dead Bat

Be cautious if you find a bat that appears to be dead. Bats can lower their body temperature to conserve energy and this can make them look dead. However, they will become active once they rewarm their body, and are still able to defend themselves.

If you are confident the bat is dead, the carcass can be delivered to an ENR office.

Wear heavy leather gloves. Use a box or container to pick up the bat, as shown on page 12, or pick the bat up with a plastic bag over your hand. Seal it inside a second plastic bag and include a note with your name and the location and date you found the bat.

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SUPPORTING BAT CONSERVATION

There are several things you can do to support bat conservation:

- Use the bat-friendly practices described in this guide and share them with your friends.
- If bats are using your building, let ENR know. We are interested in hearing about bats in buildings, as well as unusual bat observations (such as flying in winter) as possible signs of white-nose syndrome. Even random bat observations help us learn about where bats are found in the NWT. Report all bat observations to ENR through *WildlifeOBS@gov.nt.ca* or a regional ENR office.
- Help monitor bats in the NWT by conducting counts of bats exiting a roost, submitting photos, or submitting guano (poop) samples. Contact *WildlifeOBS@gov.nt.ca* or the regional ENR office for more info.
- Build a bat house and let ENR know if bats are using it.
- Participate in annual Bat Week activities. Bat week is in October, the week leading up to Halloween. For more information see *http://batweek.org*
- Stay out of caves that may be used by bats in the winter. The fungus that causes white-nose syndrome can get on to boots, equipment and clothing and be spread accidentally by humans.
- Help implement the NWT Bats Management Plan. Visit *https://www.enr.gov.nt.ca/en/services/bats* or contact your local ENR office for more information.

Resources

SEE THE FOLLOWING WEBPAGES FOR MORE INFORMATION ON:

Bats in the NWT:

www.enr.gov.nt.ca/en/services/bats

Poster and activities: *https://www.enr.gov.nt.ca/sites/enr/files/bat_poster.pdf*

Brochure: *https://www.enr.gov.nt.ca/sites/enr/files/resources/bat_brochure.pdf*

The status of NWT bats as species at risk:

www.nwtspeciesatrisk.ca

Bat status report:
www.nwtspeciesatrisk.ca/sites/default/files/bat_status_report_and_assessment_final_apr617.pdf

Bats in buildings, bat houses, and other bat conservation info:

Bat Conservation International: *www.batcon.org*

Neighbourhood Bat Watch: *https://batwatch.ca/*

Alberta Community Bat Program: *www.albertabats.ca*

B.C. Community Bat Program: *www.bcbats.ca*

White-nose syndrome:

www.whitenosesyndrome.org

Rabies prevention and other health concerns:

NWT Health and Social Services - Rabies prevention:
www.hss.gov.nt.ca/en/services/sant%C3%A9-environnementale/rabies-prevention

Public Health Agency of Canada - Rabies prevention:
https://www.canada.ca/en/public-health/services/diseases/rabies/prevention.html

Precautions for cleaning up animal droppings:
https://www.cdc.gov/fungal/diseases/histoplasmosis/index.html

Ecology North

Acknowledgments

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Alberta Community Bat Program
www.albertabats.ca

community bat programs of BC

Environment and Climate Change Canada
Environnement et Changement climatique Canada

batcon.org
BAT CONSERVATION INTERNATIONAL

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