

# Building and maintaining your bat house



## Benefit of bats

In Minnesota, we have eight different bat species:

- Big brown bat
- Little brown myotis
- Silver-haired bat
- Eastern red bat
- Hoary bat
- Northern long-eared bat
- Tri-colored bat
- Evening bat

Bats are an important part of our ecosystem and eat up to half of their body weight in insects every night. Not only do they eat the mosquitoes that would otherwise munch on you, but they are also extremely important to agricultural production by reducing crop damage caused by insects.



*Big brown bat*



*Silver-haired bat*



*Northern long-eared bat*

## Habitat

Though some bats prefer caves and mine shafts, many species of bats are dependent on dead and dying woody vegetation for shelter. Some like to squeeze into the narrow gap between peeling bark, while others prefer hollow trees.

We often remove dead or dying trees for our own safety, leaving bats with no safe places to roost as they migrate, settle, and raise their young. Young bats are particularly vulnerable to normal forest management activities like logging during the nesting season in the early summer.

If bats cannot find a more appropriate place to nest, they may squeeze into gaps in garages, sheds, or even the attics of people's homes. Make sure that your buildings are bat-proofed before a bat arrives! Bats need just 3/8" to gain access, so be diligent when plugging any holes.

## Build a bat house

Safe and suitable nesting areas can be scarce for bats, particularly in urban and suburban environments. To give our flying friends a safe place to stay, consider building a bat house.

There are many different options out there for bat houses. Because bats have specific space and temperature requirements that many designs do not fulfill, we do not recommend that you purchase a pre-made bat house. Instead, we recommend building your own!

The best current designs are the four-chamber nursery bat house and the rocket box. The nursery house looks like a slim wooden box with many chambers inside to make a bat hotel. The rocket box is a tall thin square box with many layers of wood on the inside for bats to squeeze into. The plans for both houses can be found on Bat Conservation International's website ([batcon.org](http://batcon.org)).

Do not paint or stain your bat house. Painting it can make it too hot or too cold for the bats inside. Be sure to seal all the seams to make sure the box stays warm and roughen the roosting boards and landing pads to make them easy for bats to grab onto.



*Tri-colored bats huddled up*





## Place your bat house

Place your bat house within a few hundred meters of a water source and in a place that receives at least six hours of sun exposure. When mounting your bat house, make sure it is:

- 10 to 20 feet off the ground
- 10 to 14 feet above any vegetation
- 20 to 30 feet away from the nearest tree



More than one bat house in an area is encouraged as bats are more likely to move into boxes if there's three or more mounted together. Review the panel about building a bat house for details about the different types of bat houses.

A nursery bat house should be placed on the side of a building. This provides more protection from the wind, sun, and shade than a pole or tree would. The rocket box can only be mounted on a pole.

## Keep out unwanted guests



Wasps and yellow jackets also like to use bat houses to make their homes. Wasps will coexist with bats in the houses, but if their nests get too big, it could push the bats out. Remove wasp nests in the winter when they are inactive.

If you see large amounts of yellow jackets entering and exiting the bat house, it's likely they've overtaken it. Leave the nest up until winter when you can safely remove it. Do not spray your bat house with pesticides.

## Clean and maintain your bat house

One of the best parts of modern bat houses is that they're self-cleaning! The guano falls out of the bottom of the nest box onto the ground, so install your house where you don't mind a few droppings.

If you see bats near the bottom of your bat house or on the exterior, the house may be too crowded and hot, so consider adding another bat box.

Monitor your box to make sure boards aren't becoming warped or damaged.

Check your box for bats by looking for guano on the ground outside or set up a lawn chair 15 minutes before sunset and see if any come out! Do not be discouraged if it takes some time, even years, for the house to be occupied.

Sometimes, migrating bats may stop by for a night or two and move on.



*Top right: Four chambered nest box. Bottom left: Little brown bats roosting. Bottom right: Little brown bat.*

## Other ways to help bats

If you're interested in other ways to help bats and other wildlife, consider the following tips:

- If they don't pose a safety concern, leave dead trees standing.
- Move your forestry management to the winter when bats and other nesting animals are less likely to be disturbed.
- Protect wetlands and other sources of freshwater for native animals.
- Don't use pesticides. They can poison or kill bats, who are natural pest controllers.
- Keep your cats indoors. Cats are one of the most common causes of bat casualties, particularly young bats.
- If you find an injured bat, do not pick it up. Bats can carry diseases that are harmful to humans if bitten. Contact the Wildlife Rehabilitation Center of Minnesota ([info@wrcmn.org](mailto:info@wrcmn.org) or 651-486-9453) for advice on what to do with an injured bat, or any other wildlife.
- Report sick or dead bats to the Minnesota Department of Natural Resources. ([dnr.state.mn.us/reportbats](http://dnr.state.mn.us/reportbats))

## Contact us

Nicole Witzel  
Wildlife Biologist  
[nicole.witzel@hennepin.us](mailto:nicole.witzel@hennepin.us)

### *Photo credits*

*Cover: Eastern red bat by Chris Harshaw via iNaturalist.*

*Right inside flap: Bat box (left) by Rhododentrites via iNaturalist, Tri-colored bats huddled up (upper right) by Christa Rittberg via iNaturalist, Bat house on pole by Minnesota Department of Natural Resources (MN DNR)*

*Inside left: Big brown bat by Andy Birkey and Silver-haired bat by Jake Stacken, via iNaturalist. Used with permission via Creative Commons license 4.0. Northern long-eared bat by U.S. Fish and Wildlife Service (USFWS)*

*Inside middle: Nursery bat house by Minnesota Department of Natural Resources (MN DNR), Wasp nest by Thomas Muhl via iNaturalist*

*Inside right: Bat box (upper right photo) by Quadell via iNaturalist, Little brown bat (lower right photo) by Paul Erdmann via iNaturalist*

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**Hennepin County**  
Environment and Energy  
[environment@hennepin.us](mailto:environment@hennepin.us)  
612-348-3777

34-406-08-22

