



HCTF Education Habitats at Home

Learn how to create habitats that bring nature into your own backyard!

Make.. Habitats for Bats



Why Help Bats?

Bats have a bit of a scary reputation but it is undeserved! They are an important part of healthy ecosystems and provide natural control of flying insect populations (like mosquitoes), as well as agricultural and forest insect pests. BC has the highest diversity of bats of any province in Canada, with 15 resident species. However, over half of these species are considered to be “at risk” due to habitat loss and degradation, intentional extermination, and other pressures. Just like us, bats need these basic elements to survive: shelter, water, and food. Here are some ways we can help bat populations in BC and learn more about these fantastic furry fliers!

Bat Safety

- Like all wildlife they may bite if handled and can carry disease. You can easily avoid harm simply by not touching live or dead bats.
- All the bat species in BC are insect eaters. Of the 900+ species of bat worldwide, only 3 feed on blood. These species are found in Central and South America.



Natural Bat Habitats

Snags and other shelters

Dead trees that are still standing are known as snags. Their many cracks and crevices make them a haven roosting bats. While some bat species will inhabit human-made structures, many will only use natural features such as snags, tree foliage, cliffs, and caves. Retaining snags and large living trees provides bats with shelter. Planting new groves of trees and retaining natural areas will provide habitat for the future – and benefit other wildlife as well!

During the summer, female bats of many species raise their pups in maternal colonies. If the roost is blocked off or the structure is knocked down without alternate roosts being provided, the population will be decimated. A local bat group can help make the process safer for the bats.

Hibernacula are locations where bats hibernate during the winter. Bats in BC hibernate in caves and mines, deep rock crevices, and other locations where temperatures remain constant and above freezing. Leaving these habitats undisturbed is critical for bats overwinter survival.



Wonderful wetlands

Wetlands, lakes, and ponds not only provide essential sources of water for bats, they are also among the most productive habitats for their prey: insects. Flying is hard work for bats and they need to eat large numbers of insects every night to fuel themselves – especially when they are raising pups. Bats will sometimes consume more than their own weight in insects per night!

A water source close to their roost (within 2 kms) is essential for bats. Roosts, particularly maternal colonies, are hot places and bats can become dehydrated. Bats drink while in flight so they need open, still bodies of water to do this. Some small, maneuverable species need only 1 metre of open water, while larger, faster fliers need up to 30 metres.

Wetlands are frequent targets for development and agricultural use. To help bats, we must protect the whole ecosystem that supports them. Visit the B.C. Wildlife Federation's Bog Blog (bcwfbogblog.com/) for resources and to connect with conservation organizations and wetlands stewards in your area.



Building Bat Boxes



Will your box benefit bats?

Building bat boxes has become a popular tool in bat conservation, providing bats with a safe place for bats to rest during the day and raise their pups. However, for the box to be beneficial, it must meet some important criteria. Otherwise, the box may not be used or even be a danger for potential residents.

❑ **Is shelter needed?** Not all bat species will use bat boxes. In BC, boxes are used primarily by two species (Little Brown Myotis and Yuma Myotis). Depending on the bats in your area, it may be better to protect and enhance natural shelters.

❑ **Are there bats in the area?** If bats in the area are living in a place where they are not wanted, or in habitat that will be removed, bat boxes can be a great way to help. Contact a bat program in your area to learn about the best practices for excluding bats.



❑ **Is there space?** In order to provide bats with a variety of temperature options, boxes must be large and multi-chambered or in numerous locations with different aspects. Bats like a warm roost but can overheat and die if it becomes too hot. Bats also require a clear flight path to the boxes.

❑ **Can you commit?** Bats may continue to return to a site for decades so a location with a stable future is important. Bat boxes are also more valuable to conservation science when they are monitored and bat counts are regularly made and reported.



Design 1: The Side-mounted Box

These boxes can be mounted on the sides of buildings or on posts. Multiple-chambered designs can hold hundreds of bats and are more successful than single versions. Four-chambered boxes provide bats with the opportunity to move between chambers with changes in temperature. Two multi-chambered bat boxes back to back on a post is ideal.

Design 2: The Rocket Box

Two-chambered rocket boxes are usually 1 m tall and contain concentric roosting chambers around a post. These boxes are extremely effective, likely because the chambers face all cardinal directions, providing a multitude of micro-climates within the bat house. Bats are able to follow the warmth of the sun throughout the day by shifting inside the box.

Build or buy?

A well-designed, well-built box will be most beneficial for bats and require the least maintenance. If you have the skills to build your own, you can find plans on the Community Bat Programs of BC website (bcbats.ca/bat-boxes/). You can also use the website to connect with a local bat program which may offer boxes for sale. The website can also show you what to look for in commercial models as not all are correctly designed, or suitable for bats in BC.



The **Community Bat Programs of BC** website is a fantastic resource for all things batty! Find everything you need to know about bat boxes, registering your box, and collecting valuable conservation data on the residents.

You can also learn about all the species of bats in BC, what to do if you have a colony on your property, how to help for an injured bat, find local bat events, sign up for bat counts, and so much more! www.bcbats.ca

