

Welcome to the first newsletter for the Canadian Bat Box Project! In this edition you will find details about how to monitor your bat box and report results, how to identify guano, and a unique way of mounting bat boxes on metal siding. This summer is the first of three field seasons for the project, and we plan to produce newsletters twice a year with updates.

To date we have received almost 800 survey responses from across Canada, including all provinces and almost every territory. Participants who indicated they are willing to install a microclimate logger in their box will be contacted individually if we have a logger available to mail to them. We have a limited number of loggers available for this first summer of the project, but we are hoping to expand our sample size in summer 2022. For those who filled out the survey, please do not forget to update your survey responses with any information that was missing or has changed. For example, some participants could not provide exact bat box dimensions either because the box was hard to access during winter, or the box is located at a summer residence. You can either fill in the survey again using the same contact information, or email the missing information to [kjvanderw\[at\]gmail\[dot\]com](mailto:kjvanderw[at]gmail[dot]com)

For those who have not yet registered their bat box with the program, you are welcome to do so! You can also register your box with long-term programs like [batwatch.ca](http://batwatch.ca), bat [iNaturalist](https://www.inaturalist.org), or provincial community bat programs in [Alberta](#), [British Columbia](#), and [Nova Scotia](#).

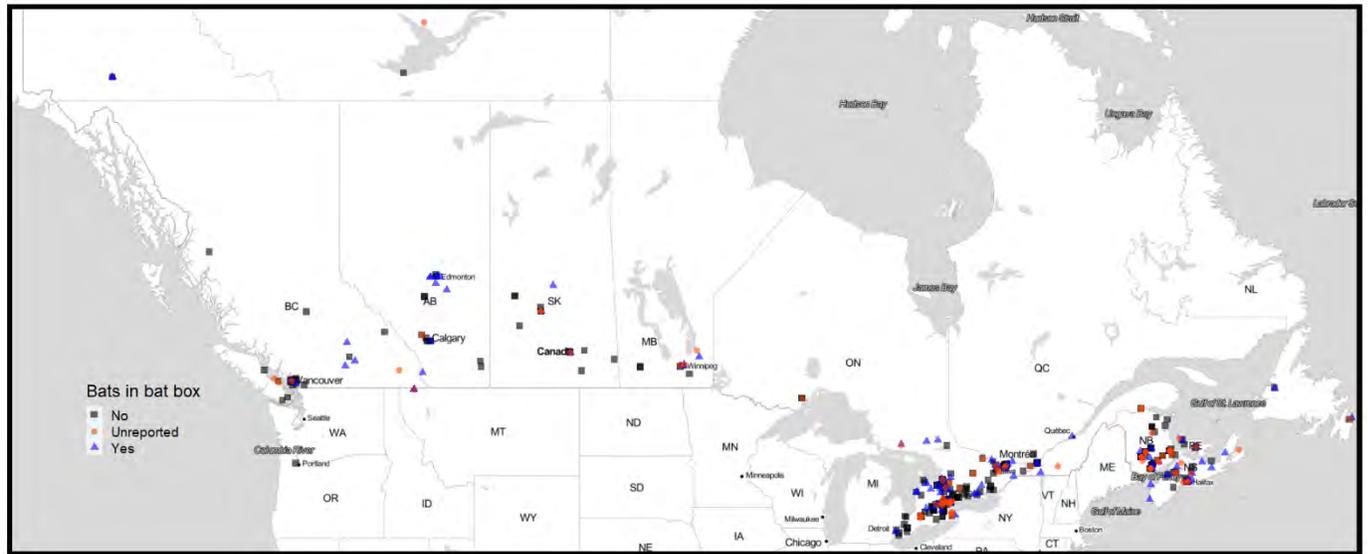
About 20% of participants in the Canadian Bat Box Project have so far reported bats in their bat boxes. One of our goals is to develop better recommendations for bat box design and placement in different regions of Canada using data from this project. There is currently a lack of data on bat box use, especially in Canada. A few things we do know about bat boxes in Canada are that bats are using bat boxes for roosting and raising pups even in Eastern Canada where bat populations have been decimated by the fungal disease white-nose syndrome. Of the 19 bat species found in Canada, only three species are known to commonly use bat boxes: Little Brown Myotis (*Myotis lucifugus*), Big Brown Bats (*Eptesicus fuscus*), and in Western Canada Yuma Myotis (*Myotis yumanensis*).

If you would like to contribute an article, pictures, or an idea for an article to this newsletter email Karen Vanderwolf at [kjvanderw\[at\]gmail\[dot\]com](mailto:kjvanderw[at]gmail[dot]com)



CANADIAN WILDLIFE  
FEDERATION  
FÉDÉRATION  
CANADIENNE DE LA FAUNE

The map below shows the distribution of study participants.



### **Monitoring your bat box**

Now that you have filled out our [online survey](#) about the physical properties of your bat box, it's time to find out how many bats use your box in the summer! You can verify whether bats use your box in a few ways. We would like participants to conduct a minimum of four emergence counts at their bat box during the summer (May to October), although you can do as many counts as you like. Bats will not use bat boxes during the winter. Briefly, to do an emergence count you sit near your box at sunset and count how many bats fly out of your bat box. More details about how to conduct an emergence count are available [here](#). You can also shine a light up into your box during the day to try to see bats or look for guano (bat poop) below your box. You can report your observations each time you do an emergence count or look inside your box for bats by filling out this [short survey](#). It is important to report these observations even if you do not see any bats.

We are particularly interested if bats show signs of heat stress in bat boxes. On hot days, please take a look at your bat box to see if bats are outside the box, on the ground, or roosting at the bottom of the box (bulging out the bottom). You can report these observations using the same survey to report bat counts.

It is important to avoid any physical contact with bats, especially any contact with bare skin. If you find bat carcasses or bats that are unable to fly under your bat box, please contact your provincial [Canadian Wildlife Health Cooperative office](#). If you are concerned about bats in your house, there is information and advice [here](#).

### **How to identify guano**

One way to tell if bats are using your box is to look for bat guano (poop) underneath your box. Guano looks a bit like mice poop, but there are some differences. When guano is dry, it easily crumbles because the components are independent insect bits. All bats in Canada exclusively eat

insects. Mice poop does not easily crumble because it is mainly plant fibers. We can identify which bat species are using your bat box by extracting DNA from guano, and we will be performing these analyses in future years (summers 2022-2023).

Histoplasmosis, an infectious disease caused by the fungus *Histoplasma capsulatum*, can occur when people breathe in spores of the fungus. Prevention of histoplasmosis relies on avoiding exposure to dust in contaminated environments. The primary reservoir for histoplasmosis is nitrogen rich soils, such as soil with bird or bat droppings. Histoplasmosis is rarely reported in Canada, but you can further minimize risk by spraying water on guano (to eliminate dust) before examining it. More information [here](#) and [here](#).

These pictures show bat guano on a roof below a bat box in Ontario.



John Cree, Ontario

### **Unique way of mounting bat boxes on metal siding**

Most bat boxes are installed using nails or screws, but what if you wanted to put bat boxes on a building with metal siding? One participant in Nova Scotia used [magnets](#)! The magnets were screwed onto wooden strips attached to the back of the bat box as shown in the photo. Since the magnets and cups are metal, as is the siding on the shed, the participant cut rounds of black electrical tape to put over the magnets to prevent rust. That way, the participant does not scrape the finish on the siding when they take the boxes down to clean and repair. The two bat boxes successfully attracted a colony of bats. You can see six magnets on the back of this bat box.



Nova Scotia

Side view of one of the bat boxes with magnets and the two boxes mounted on the building.



**Bat Boxes Across Canada**





Ontario



Ontario



Brian Hindley, Ontario



John Cree, Ontario



Stephen Cluff, Ontario



Grundy Provincial Park, Ontario



Roddie Munn, New Brunswick



Sarah Vanderwolf, Alberta



Newfoundland