



## Protocol for counting bats in a nursery

Before counting emerging bats, you must locate the openings the bats are using to enter the building. To see how, see [this protocol](#).

1. It is best to conduct counts on warm nights when it is not windy or raining because bats may chose to remain in the roost when conditions are poor.
2. There are two important periods during the summer for monitoring maternity colonies. The first is before the young of the year bats take flight (pre-volant period), and the second is when the young of the year bats start foraging with their mothers (post-volant period). The timing of these periods varies from year-to-year, and by location, but generally, the prevolant period is from mid-June to early July, and the post-volant period is from mid-July to early August. The best case scenario for monitoring is to select two nights relatively close together in time (a few days apart) within each monitoring period (i.e., two nights in the prevolant period and 2 nights in the post-volant period). However, some data is still better than none, so even if you can only do one night per year, this is still great – just make sure you schedule your monitoring night during the same period each year.
3. A data sheet for counts is provided below. Please make sure that you have registered your colony on [batwatch.ca](http://batwatch.ca) ([Participate Tab – Add a colony](#)) and then identify your colony with the unique identification number provided during the registration process. After your count, enter your data on the online form ([Participate Tab – Add a count](#)). If you experience difficulties with the online form, you can mail or email the data sheet to us (see contact information below).
4. Check the sunset time for your area on a weather website. Take a few minutes before sunset to get comfortable and ready for your count. Position one or two people at each opening in the roost. On the data form, record the name of each observer and the opening number they observed. Each observer should carry out his/her own count.
5. Observers should situate themselves such that bats emerging from the openings will be silhouetted against the night sky. You can use a light to see your notes, but avoid shining it on the roost entrance. Bright and direct lighting can prevent the bats from emerging from the colony. Bats will typically begin emerging soon after sunset, although they may not come out until it seems quite dark.
6. Count all of the bats that come out of the opening that you are monitoring. You can use a click counter or make ticks on a notepad each time you see a bat come out of opening. Avoid counting bats that just fly around the opening. Often bats from another roost will come to visit and investigate. In some instances, bats may re-enter the roost while the others are

leaving. Attempt to count the re-entering bats and subtract the number of these individuals from your tally. If it becomes too difficult to follow the bats exiting and entering, or if there

are too many coming out, try your best to get an approximate count, and note this in the comments section.

7. End the count approximately 30 minutes after the last bat has exited the colony. If possible, record the time of the last exit and the temperature at the end of the count.
8. To complete the data sheet, record the name of each observer and the number of bats that each observer counted. If there is more than one opening used by your colony, note this on the data sheet. If this is the case, number the openings and indicate which observer was assigned to each opening. If you are lucky enough to have more than one observer watching each opening, write down the number of bats counted by each observer on the data form. The online form will take the average of the two observers counts and it will correctly calculate the total number of bats in the colony.
9. On the online form, feel free to upload diagram(s) or photo(s) of the roost openings. If you are willing to have use your photos as educational material in the future, please let us know in the comments section. If not, no images of your colony will be released to anyone other than the batwatch.ca team.

**Bat colony count data sheet**

**SECTION A:**

Unique number \_\_\_\_\_  
of the colony

Colony name \_\_\_\_\_

Date of the count \_\_\_\_\_

T(°C) at the beginning \_\_\_\_\_  
of the count

T(°C) at the End \_\_\_\_\_  
of the count

Sky    \_\_\_ Clear (0 to 10%)  
      \_\_\_ Partly cloudy (10-50%)  
      \_\_\_ Cloudy (50-90%)  
      \_\_\_ Overcast (90-100%)  
      \_\_\_ Rainy  
      \_\_\_ Stormy  
      \_\_\_ Not recorded

Wind       \_\_\_ Calm  
            \_\_\_ Light  
            \_\_\_ Moderate  
            \_\_\_ Windy  
            \_\_\_ Not recorded

Moon       \_\_\_ New moon  
            \_\_\_ First quarter  
            \_\_\_ Full moon  
            \_\_\_ Third quarter

Time of 1<sup>st</sup> exit \_\_\_\_\_

Time of last exit \_\_\_\_\_

Time at the end \_\_\_\_\_  
of the count

**SECTION B:**

- If bats emerge from more than one opening, please number the openings. Write down the name of each participant, and the number of bats emerging from each opening.
- If more than one observer carries out a count at the same opening, record the name of the participants and record the same opening number along with the number of bats recorded by each observer.

	Name of the Participants	Opening Number	Number of bats Counted
Observer 1:	_____	_____	_____
Observer 2:	_____	_____	_____
Observer 3:	_____	_____	_____
Observer 4:	_____	_____	_____

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If you prefer to send the form by mail/email:**

**In Central Canada:**

Department of Biology  
University of Winnipeg  
c/o Craig Willis  
515 Portage Ave., Winnipeg, MB, R3B 2E9  
[batwatch@outlook.com](mailto:batwatch@outlook.com)

**In Quebec:**

Ministère des Forêts, de la Faune et des Parcs  
Direction de la biodiversité et des maladies de la faune  
a/s Nathalie Desrosiers  
880, chemin Sainte-Foy, 2e étage, Québec (QC) G1S 4X4  
[info@chauvesourisquebec.ca](mailto:info@chauvesourisquebec.ca)