

# The Nova Scotia Family Bat Box Network

# GUIDE TO MONITORING FOR BATS!



rpbirdman

## CONTENTS:

- BAT SPECIES IN NOVA SCOTIA
- 
- WHERE TO PLACE YOUR BOX
- 
- MONITORING BY SIGHT
- 
- MONITORING BY SOUND
- 
- REPORTING YOUR SIGHTINGS

Brought to you by the bat-loving folks at the Young Naturalists Club, Mersey Tobeatic Research Institute, the NS Habitat Conservation Fund and Nature Canada's Naturehood program



# BAT SPECIES IN NOVA SCOTIA

## Hibernating Bats

Fun Fact! Bats may eat up to or more than their own body weight every night!



Geoffrey Kuchara

- Little Brown Myotis**  
(*Myotis lucifugus*)
- roosts in buildings, bat boxes, and cavities, often in large groups
  - tends to forage above or near water
  - gives birth to just one pup
  - Endangered in NS and Canada



Adrianciuarea69

- Northern Myotis**  
(*Myotis septentrionalis*)
- cavity rooster
  - roosts in smaller groups than Little M.
  - tends to forage in or above the forest canopy or above small ponds
  - Endangered in NS and Canada



Weber

- Tri-coloured Bat**  
(*Perimyotis subflavus*)
- found in SWNS and along the Fundy coast
  - in NS, roosts exclusively among beard lichens
  - named for its unusual hairs, which are black at the root, yellow, then brown at the tip
  - Endangered in NS and Canada



JasonOndreicha

- Big Brown Bat**  
(*Eptesicus fuscus*)
- \*not often seen in NS, but found in NB
  - cavity rooster
  - roosts individually or in small groups
  - flies with slower wing beats than other hibernating bats

## Migratory Bats

Bats are the only mammals that can fly!



Forest and Kim Starr

- Hoary Bat**  
(*Lasiurus cinereus*)
- largest bat in Canada
  - roosts in trees, usually alone
  - emerges from their roosts later in the evening than most other bats
  - forages in open fields or over water
  - migrates South in the fall and usually do not hibernate



JM Butler

- Eastern Red Bat**  
(*Lasiurus borealis*)
- roosts in mixed-hardwood forests, usually alone
  - births 1-4 pups and has 4 mammary glands instead of the usual 2
  - migrates South in the fall but may hibernate in warmer areas on the way



Matt Tillett

- Silver-haired Bat**  
(*Lasionycteris noctivagans*)
- roosts in trees
  - emerges from the roost to feed earlier than most bats, just after sunset
  - more often detected during migration and less often during summer foraging
  - first breeding in Atlantic Canada recorded in NB in 2020

You can find more photos of each of these bats at [batconservation.ca](http://batconservation.ca) and via iNaturalist!

# WHERE TO PLACE YOUR BOX

## The Right Box

There are lots of different bat box designs out there! Scientists think the "rocket box" design might be more successful in attracting Nova Scotia's native bats, like the Little Brown Bat, but you could also find a couple different species using the easier-to-build flat box (bottom right and left, respectively)

For plans, see:  
[cwf-fcf.org/en/explore/bats/bat-house](http://cwf-fcf.org/en/explore/bats/bat-house)  
[batcon.org/about-bats/bat-houses](http://batcon.org/about-bats/bat-houses)

## The Right Habitat

Bats emerge from their summer homes at night to eat insects, so your box should be placed somewhere they can find lots of bugs! A marsh, pond, open field, or anywhere else that gets buggy at night will do.

## The Right Spot

Bats navigate using echolocation, so you don't want to confuse them in flight by placing your box behind a lot of branches or in a hard-to-reach spot. Aim for the sunny open side of a building, the middle of a field, or the edge of a pond.

Bats like it hot! Your box should be a dark colour to keep them warm inside

### Tips for placing your bat box:

- Dark in colour
- Min. 8 hrs of sun per day
- 3-6m above the ground
- Close to a water source
- Free of clutter



# MONITORING

## Monitoring by Sight

You can monitor your local "naturehood" for bats in a few ways! If you have a box or other suitable habitat on your own property, near your home, or at your local park or protected area, you can try monitoring by sight.

- Count roosting bats when they're entering/exiting the box
- Check the dead trees, cave openings, crevasses in cliffsides, or cracks in old barns or houses. Look for guano (bat poop)! If you find bats, you can do your counts at these locations (as long as it's safe to do so)
- You'll probably see more bats in summer, but you might see them in winter too, so keep your eyes open!

Bats are mammals! They give birth to live young, which they nurse!

## Monitoring by Sound

Keep predators away from your box by placing them >3m above the ground



For more on acoustic monitors, see: [wildlifeacoustics.com](http://wildlifeacoustics.com)



Bats might seem pretty quiet, but with the right tools you can "hear" all the noise they make! There are lots of different acoustic monitors out there to help you detect those faint echolocation sounds, some that are pretty simple and some that come with a bunch of cool software for identifying species.

- Try doing a Point Survey: that's where you listen for bats in a stationary spot, kept the same every week, month, or however often you go out
- Try doing a Walking Transect: that's where you walk a planned route while listening for bats, usually a straight line through suitable habitat
- For best results, aim to start your survey around 1 hour before sunrise or sunset, in clear weather, and don't give up! Try out that spot or route a few days in a row!

MAKE A BATTY HEADBAND!



Cut out the pieces

Adjust the headband to the width you need



Attach the wings and face where you like (we recommend using a gluestick)

Scare your friends! Then tell them why bats aren't really scary





# REPORTING YOUR SIGHTINGS

Scientists need your help to understand changes in bat populations in Nova Scotia! Share your sightings with researchers and the province by filling out the quick form at Nova Scotia Bat Conservation or by calling the hotline:

- To report a bat sighting, fill out the reporting form at [www.batconservation.ca](http://www.batconservation.ca) or call 1-866-727-3447
- To learn more about bats or to report a nuisance bat, call 1-833-434-2287 (BATS)

When hibernating, the Little Brown bat will slow its heartbeat from 200bpm to 20bpm

Report A Sighting

## Safety First

Remember, it's best not to touch the bats you find, even if they are injured or sick. Bats generally aren't dangerous but they can carry diseases that affect humans, and handling could hurt them, so if you are concerned about a bat near you it's best to call the professionals. Reach out to your local wild animal rescue or nearest provincial Lands and Forestry office.



## White Nose Syndrome

If you're seeing bats emerging from their roosts in wintertime, or if you're noticing a lot of sick or dead bats, you could be seeing signs of White Nose Syndrome. This is a fungal disease that gives the bats a white, powdery-looking nose and that makes them wake up in the wintertime looking for food and water. White Nose Syndrome was first detected in New York but has since spread throughout the States and Canada. Watch for signs and tell researchers if you think you're seeing White Nose Syndrome in your local bats. Most bats catch the disease through contact with other bats, but you can help reduce its spread by not touching bats and cleaning your shoes and clothes between roost visits.

Contrary to popular myth, most bats aren't blind, though prefer to echolocate

@yncns  
yncns.ca



@novascotiafamilybatboxnetwork

[facebook.com/groups/novascotiafamilybatboxnetwork](https://facebook.com/groups/novascotiafamilybatboxnetwork)

## JOIN THE COMMUNITY!

Have questions about bats, bat boxes, or anything else bat related? Join our community of family bat stewards! Share your successes, tell us what you're seeing (or hearing), and join other families in stewarding Nova Scotia's bat populations!

Join our Facebook Group! Even better, join the local Young Naturalists Club chapter near you!

# WORDSEARCH

Can you find all of these batty words?

D	D	T	H	T	W	O	R	G	D	L	O	E	R
Y	L	F	N	O	G	A	R	D	M	A	R	S	H
D	N	A	L	T	E	W	R	A	N	M	W	D	T
A	T	M	O	S	Q	U	I	T	O	R	R	A	S
H	O	A	R	Y	B	A	T	A	I	G	R	M	E
A	S	T	E	W	A	R	D	S	H	I	P	S	R
D	F	H	W	H	I	T	E	N	O	S	E	E	O
D	H	A	B	I	T	A	T	P	O	N	D	L	F
N	L	T	R	E	S	E	A	R	C	H	I	F	S
M	I	D	G	E	R	O	T	I	N	O	M	L	O
C	H	E	L	A	M	M	A	M	I	A	R	Y	P
N	O	R	T	H	E	R	N	M	Y	O	T	I	S
I	O	D	L	E	I	F	Q	X	O	B	T	A	B
T	I	M	P	O	P	U	L	A	T	I	O	N	D

RESEARCH  
FIELD  
DRAGONFLY  
DAMSELFLY  
FOREST  
MIDGE  
POPULATION  
WHITENOSE  
OLDGROWTH  
MOSQUITO  
HABITAT  
MAMMAL  
HOARYBAT  
NORTHERNMYOTIS  
STEWARDSHIP  
MARSH  
WETLAND  
POND  
MONITOR  
BATBOX

Play this puzzle online at : <https://thewordsearch.com/puzzle/2328928/>

# QUIZ

How well do you know our local bats?

- 1) Which bat is the largest bat found in Canada?
- 2) How far above the ground should you place your bat box?
- 3) Where was White Nose Syndrome first detected in North America?
- 4) Which kind of bat box is thought to be more successful in attracting bats in Nova Scotia?

Answers: Hoary Bat, >3m, New York, Rocket style

# FIND THE BATS!

Can you find all the bats in this lakeside image below? There are 12 total!



[WWW.YNCNS.CA](http://WWW.YNCNS.CA)

@novascotiafamilybatboxnetwork  
facebook.com/groups/novascotiafamilybatboxnetwork

