

# Wetland and Riparian Area Management for Bat Conservation



WCS CANADA


ALBERTA COMMUNITY  
**BAT PROGRAM**

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Program Coordinator  
Alberta Community Bat Program  
Wildlife Conservation Society Canada

# Alberta Community Bat Program


[www.albertabats.ca](http://www.albertabats.ca)

Help Save Bats! Donate to the #FriendsForBats Campaign, Sept 20 - Oct 31 [LEARN MORE](#)

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# Alberta Community Bat Program

[www.albertabats.ca](http://www.albertabats.ca)

The screenshot shows the homepage of the Alberta Community Bat Program website. The background is a close-up photograph of several bats huddled together in a cave. At the top, a blue navigation bar contains the text "Help Save Bats! Donate to the #FriendsForBats Campaign, Sept 20 - Oct 31" and a pink "LEARN MORE" button. Below this is a dark grey header with the WCS Canada logo, the program name "ALBERTA COMMUNITY BAT PROGRAM", and navigation links for "Resources", "Learn More", "Get Involved", "About Us", and "Contact". A yellow circle highlights social media icons for Facebook, Twitter, Instagram, and YouTube. The main content area features a large dark overlay with the WCS Canada logo, the program name "ALBERTA COMMUNITY BAT PROGRAM", and three buttons: "FREE RESOURCES >", "FREQUENTLY ASKED QUESTIONS >", and "SEE MORE >".

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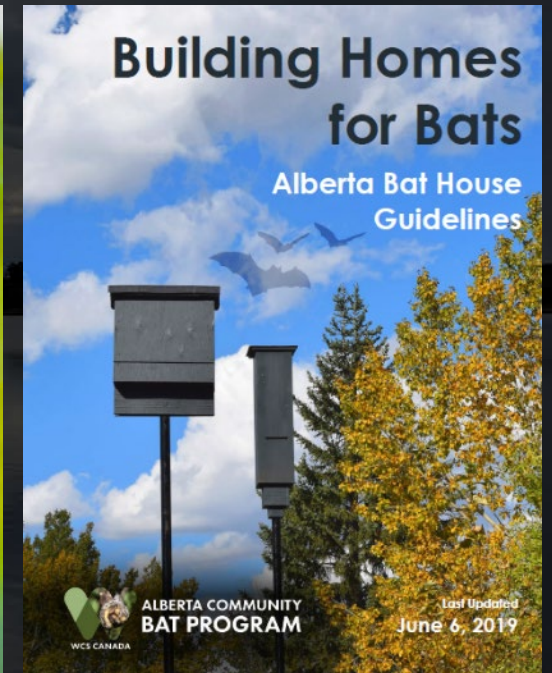
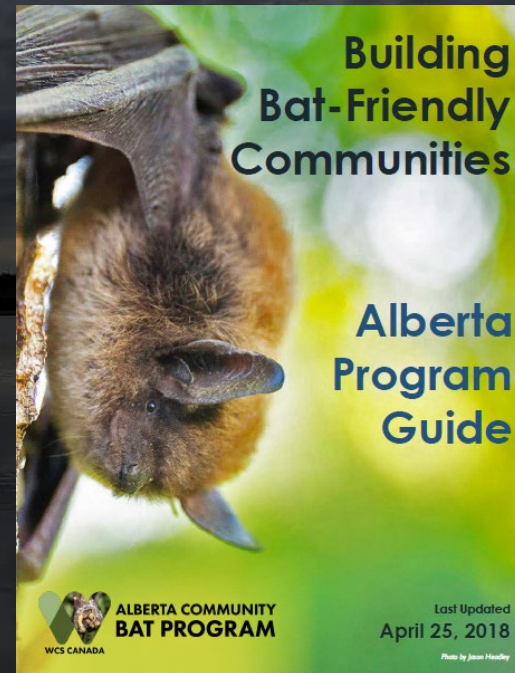
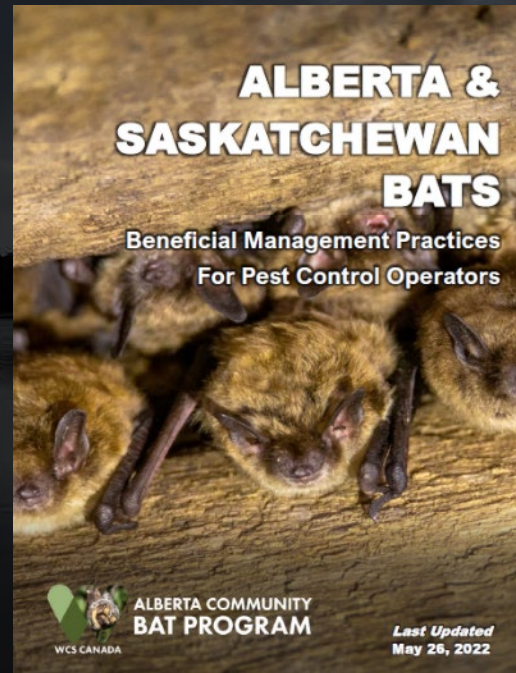
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# Resources for managing bats



[www.albertabats.ca/resources](http://www.albertabats.ca/resources)

# Alberta's Bats

- 9 species
  - Long-distance migration (and shorter hibernation)



Eastern Red Bat



Hoary Bat



Silver-haired Bat

- Shorter-distance migration (and long hibernation)



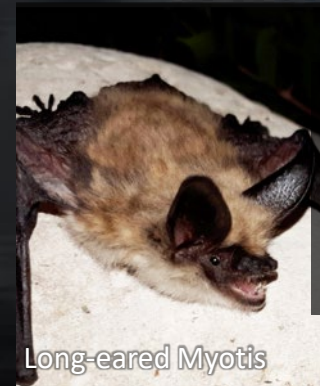
Big Brown Bat



Little Brown Myotis



Northern Myotis



Long-eared Myotis

**Not Present  
in the North  
Saskatchewan  
Basin**

Western Small-footed  
Myotis



Long-legged Myotis

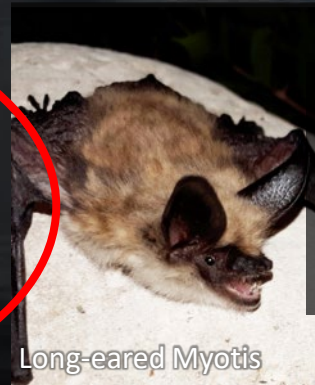
# Alberta's Bats

- 9 species
  - Long distance migration (and hibernation)



Status Assessment in Progress

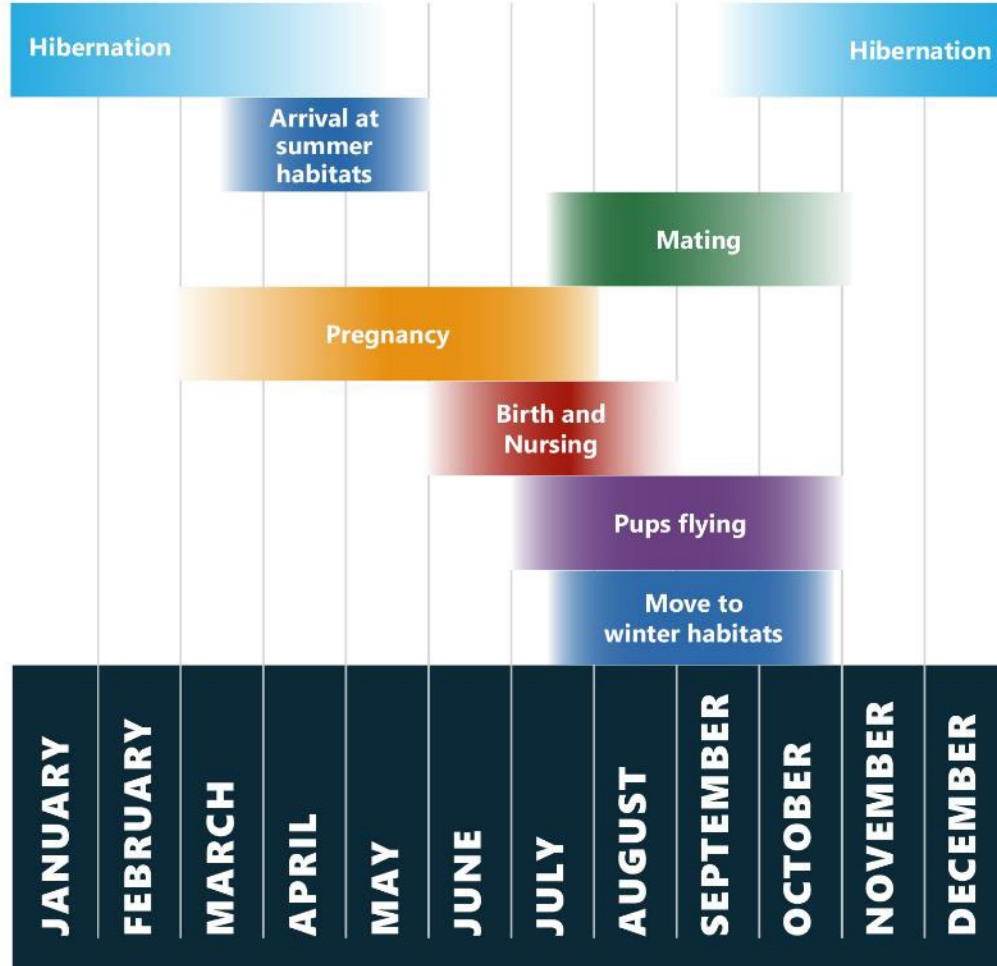
- Shorter distance migration (and hibernation)



Endangered  
(SARA Schedule 1)

Not Present  
in the North  
Saskatchewan  
Basin

# SEASONAL BAT ACTIVITY





**JANUARY**

**FEBRUARY**

**MARCH**

**APRIL**

**MAY**

**JUNE**

**JULY**

**AUGUST**

**SEPTEMBER**

**OCTOBER**

**NOVEMBER**

**DECEMBER**

## BAT USE OF BUILDINGS

Bats present in maternity roosts

Potential winter use  
by Big Brown Bats

Potential winter use  
by Big Brown Bats

### Exclusion Timing

**POSSIBLE**  
(under certain conditions)

**NO**  
(young cannot fly)

**POSSIBLE**  
(under certain conditions)

**AVOID NEW ONE-WAY  
EXITS**

**ONE-WAY  
EXIT  
INSTALLA-  
TION  
PERIOD**

**NO EXCLUSIONS OR  
ONE-WAY EXIT  
INSTALLATIONS**

**ONE-WAY  
EXIT  
INSTALLA-  
TION  
PERIOD**

**AVOID NEW ONE-WAY  
EXITS**





JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
<b>BAT USE OF BUILDINGS</b>											
Bats present in maternity roosts											
Potential winter use by Big Brown Bats						Potential winter use by Big Brown Bats					
<b>Exclusion Timing</b>											
POSSIBLE (under certain conditions)				NO (young cannot fly)				POSSIBLE (under certain conditions)			
AVOID NEW ONE-WAY EXITS				ONE-WAY EXIT INSTALLATION PERIOD				NO EXCLUSIONS OR ONE-WAY EXIT INSTALLATIONS			
ONE-WAY EXIT INSTALLATION PERIOD				AVOID NEW ONE-WAY EXITS				ONE-WAY EXIT INSTALLATION PERIOD			

**What do bats need to succeed?**



# What do bats need to succeed?

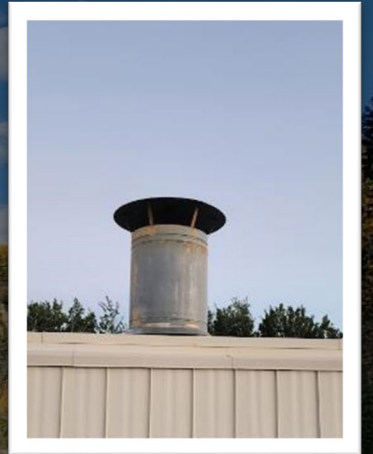
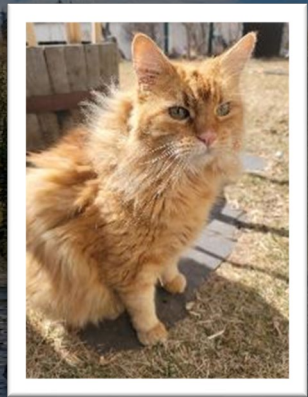
Safe access to:



# What do bats need to succeed?

Safe access to:

Food

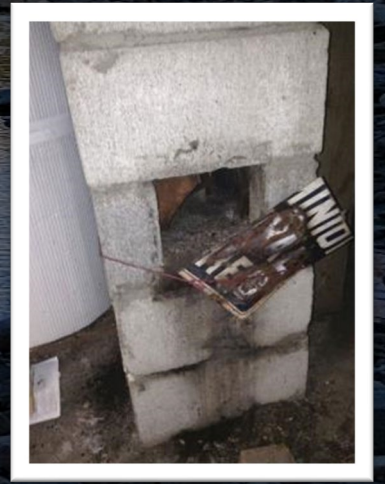


Connectivity  
(commuting and migration)

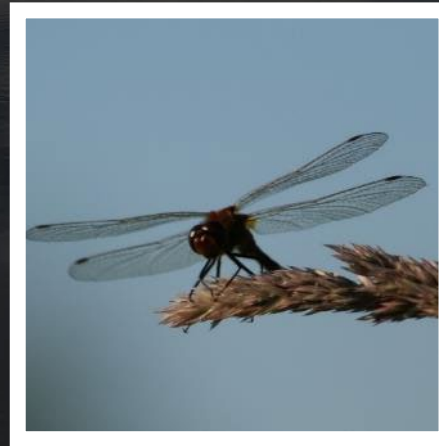
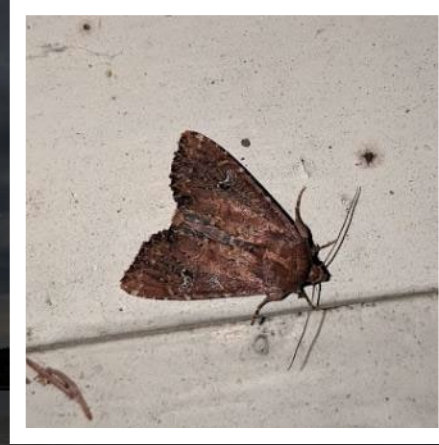
Water



Shelter  
(roosts and hibernacula)



# Bats in Canada only eat bugs (insects and spiders)





Bats eat about their own body weight per night during the peak of summer.

Year-round residents go about 6 months without food during the winter months (October – April).

# Shelter (Roosts)



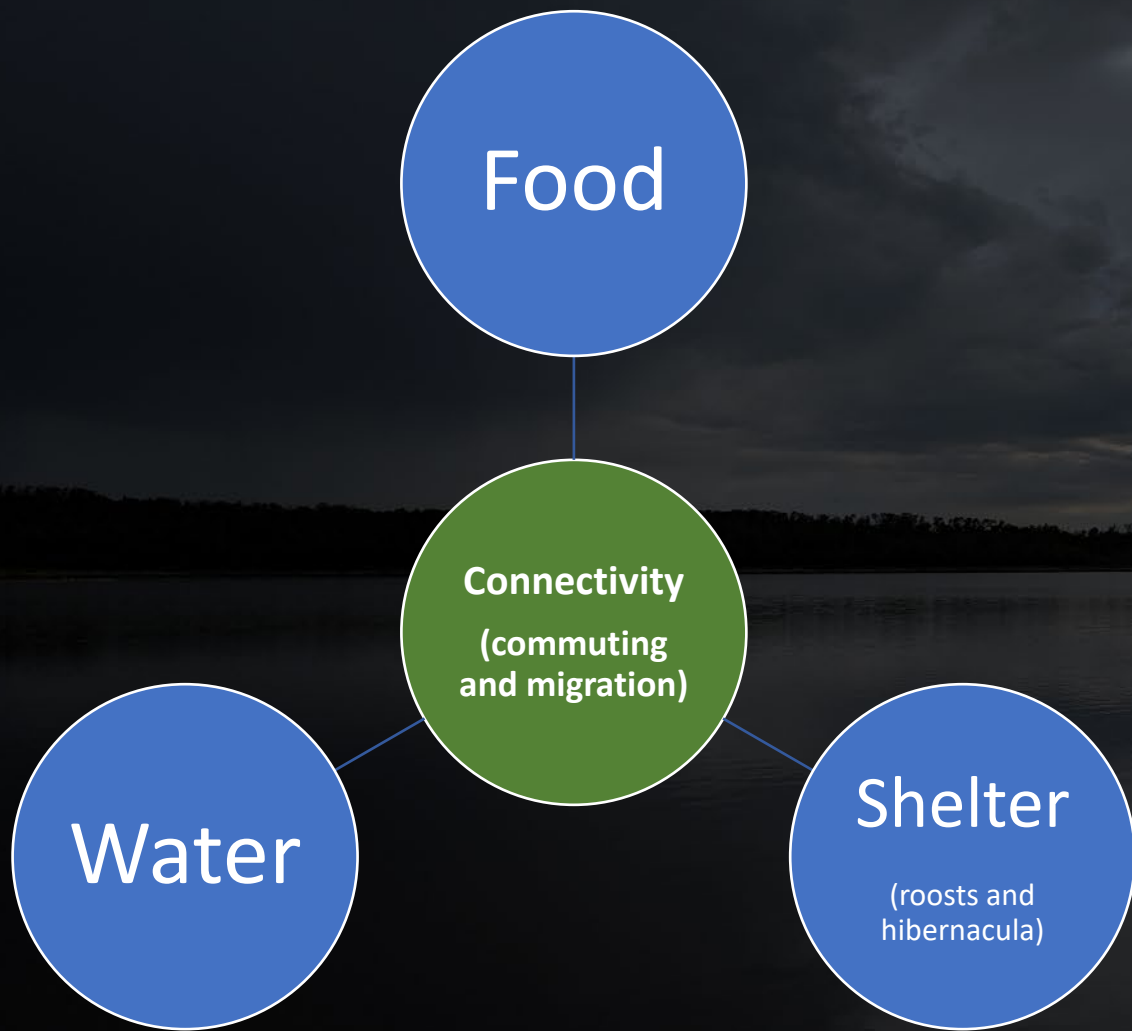
# Water







Photo: Michael Durham/Minden Pictures, Bat Conservation International



# Healthy Bat Habitat



# Bat Habitat?



# Bat Habitat??



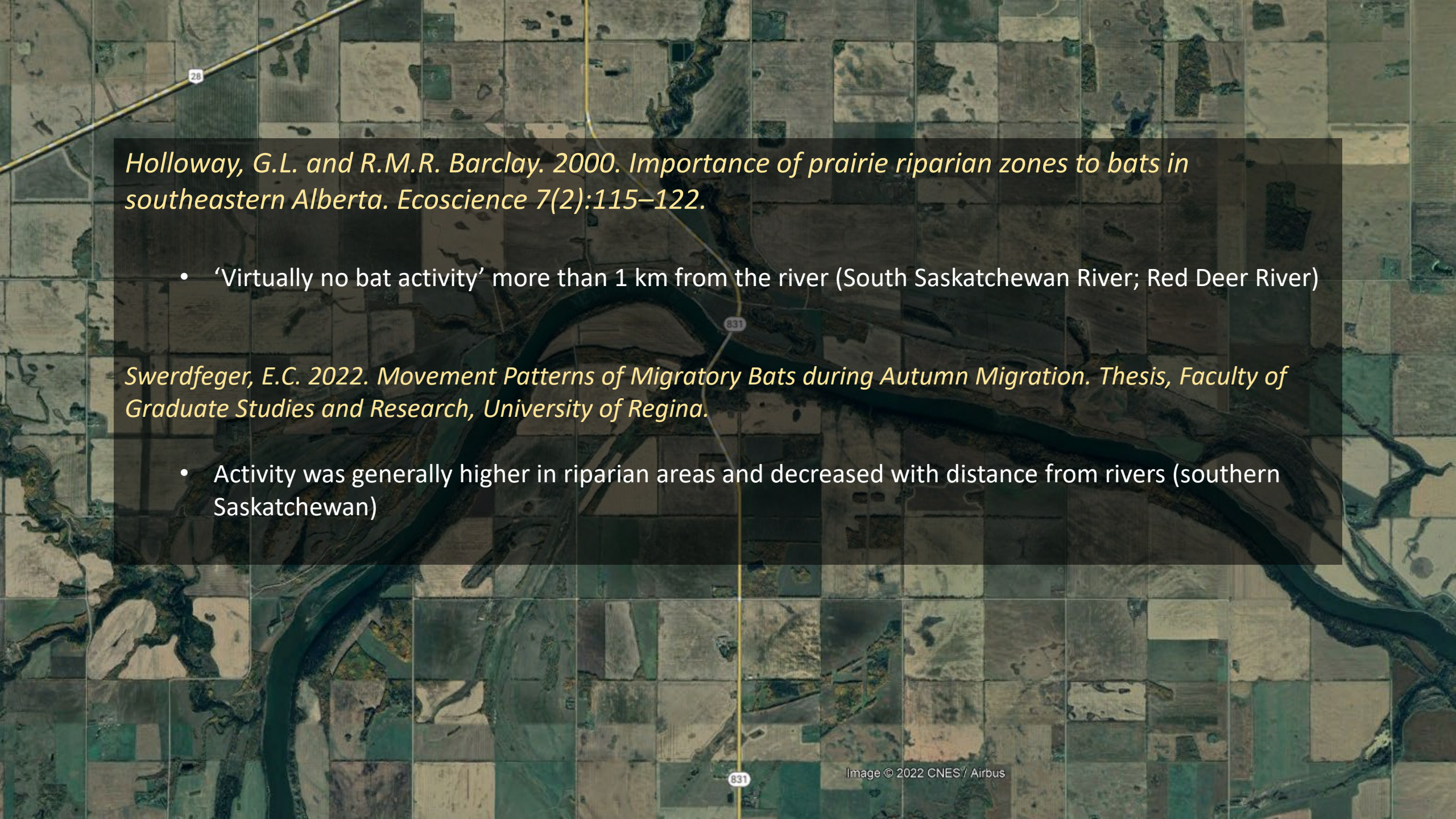


28

831

831

Image © 2022 CNES / Airbus

An aerial satellite image showing a wide river valley. The river is dark and meanders through the center. The surrounding land is divided into a grid of agricultural fields in various shades of brown, tan, and green. Several roads are visible, including a yellow road at the top left with a '28' marker and a road with an '831' marker in the center. A semi-transparent dark grey box is overlaid on the image, containing text and a list.

*Holloway, G.L. and R.M.R. Barclay. 2000. Importance of prairie riparian zones to bats in southeastern Alberta. Ecoscience 7(2):115–122.*

- ‘Virtually no bat activity’ more than 1 km from the river (South Saskatchewan River; Red Deer River)

*Swerdfeger, E.C. 2022. Movement Patterns of Migratory Bats during Autumn Migration. Thesis, Faculty of Graduate Studies and Research, University of Regina.*

- Activity was generally higher in riparian areas and decreased with distance from rivers (southern Saskatchewan)

# Bat Habitat Enhancement

## Bat Houses?

- It's mostly just two species that use bat houses: Little Brown Bats and Big Brown Bats.
- The bats that use bat houses are the same two that use buildings.
- Not all bat houses being used are likely to benefit bats.





**Beaver ponds are optimal bat habitat**





28

831

831

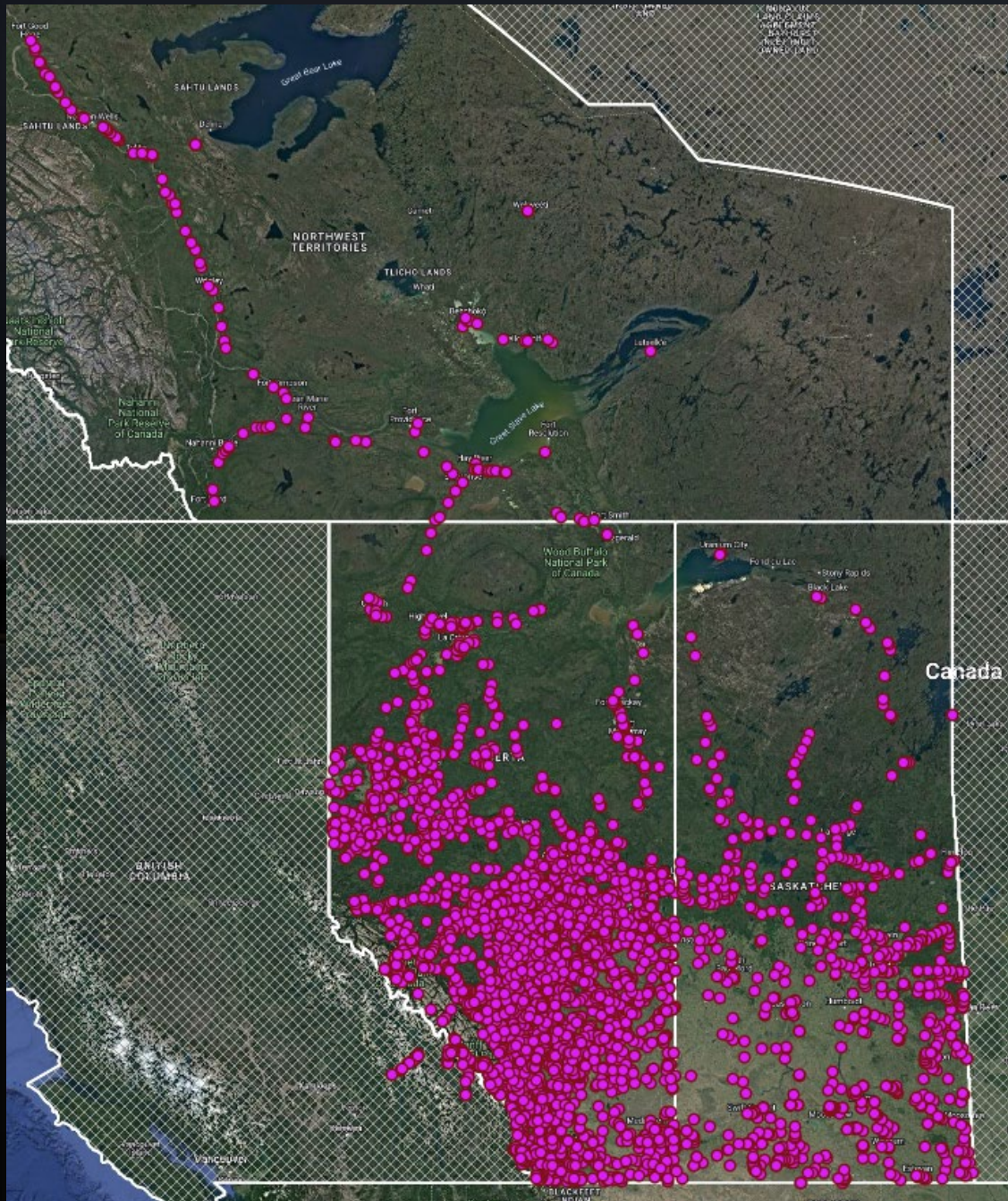
Image © 2022 CNES / Airbus





# Bridges

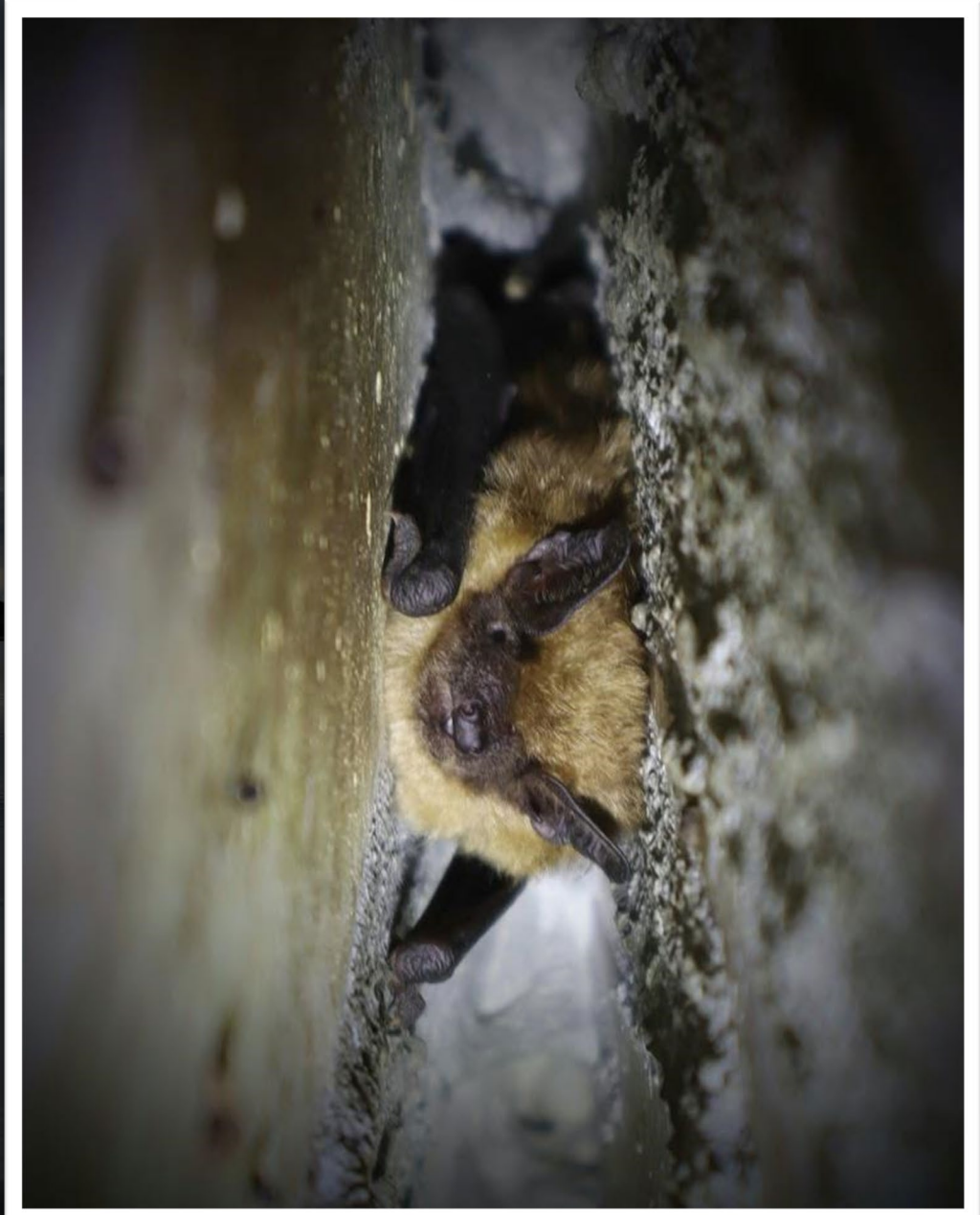
- 1000's of bridges across western Canada
- WCS Canada and several partners have already surveyed over 700 bridges.
- About half the bridges crossing major rivers and creeks are used by bats to some extent





**Maternity Colony:  
Group of mothers and offspring (pups)**











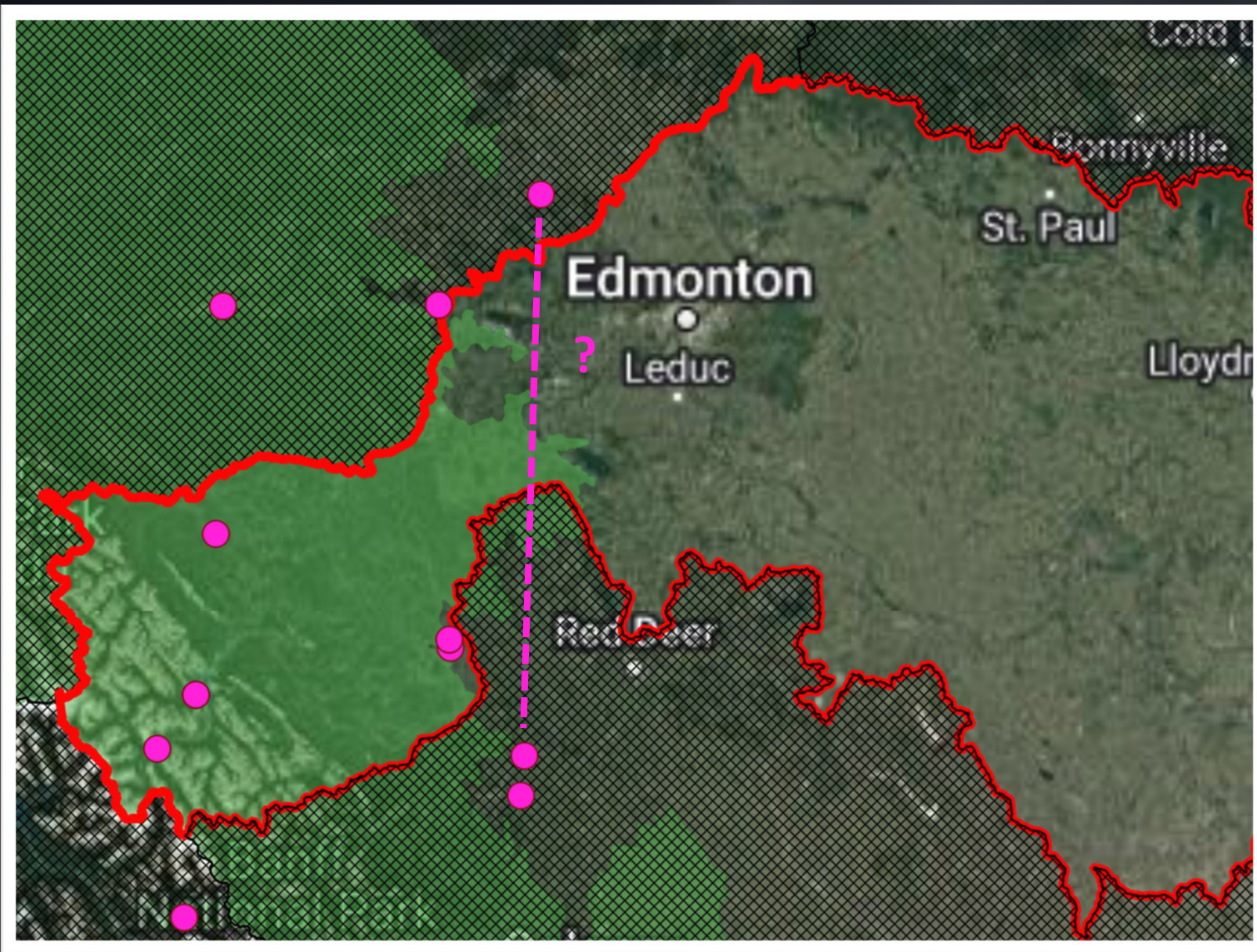




# DNA Barcoding



# North Saskatchewan Watershed



Long-legged Myotis  
(*Myotis volans*)

# Thank You!



This project was undertaken with the financial support of:  
Ce projet a été réalisé avec l'appui financier de :



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

And many others!

[www.albertabats.ca/about](http://www.albertabats.ca/about)