



ALBERTA COMMUNITY BAT PROGRAM

Alberta DNA Sampling Protocol Using Bat Guano



Thank you for participating in the Alberta Community Bat Program's citizen science project. Your contribution helps us learn more about Alberta's bats, including where different species occur, where they roost, and how their distributions may be changing over time.

One way we gather this information is by identifying bats from samples of their guano (fecal droppings). A wildlife genetics laboratory can extract traces of bat DNA from guano and use DNA barcoding to determine which species produced it. Samples submitted by residents across Alberta help us document species occurrences, identify the species using buildings and other human-made structures, and build a database of known bat roosts that can support future research and conservation.

Guano samples are especially valuable when they are associated with a roost report, which provides important information about where the sample was collected and the type of roost being used. Information about reporting a bat roost is available at www.albertabats.ca/citizenscience.

If your guano sample is selected for laboratory analysis, we will provide you with the species identification results free of charge.

Recommended supplies:

- ✓ Disposable gloves (e.g. latex gloves that can be purchased at a pharmacy) and clean tweezers or popsicle stick
- ✓ Small paper envelope (such as a coin envelope, or cut a large one to a smaller size and seal with tape)
- ✓ Pen or pencil
- ✓ Clean cotton balls and/or small box (optional)

How to collect a sample:

- Do not handle or disturb roosting bats. Never touch a living or dead bat with your bare hands.
- Select guano from the current year that is dry and has had minimal exposure to sun and water.
- Collect guano using a clean scoop (e.g., popsicle stick) or tweezers. Avoid touching guano directly and do not reuse the same sampling equipment between samples without cleaning. Use a clean scoop for each sample.
- At least 2-3 pellets are required but aim for a tablespoon if there is lots of it. Use a separate envelope for each location (e.g. one envelope per bat-house, roosting cluster, or end of attic).
- Only one pellet will be tested per envelope. To maximize species detections, collect the largest pellets and the smallest pellets in separate envelopes (for each location), unless size is uniform.
- Do not put samples in a plastic bag—they need to dry out for DNA to be preserved.
- A cotton ball can be added to the envelope to help prevent the sample from crushing. If there are only a few pellets present, the guano can be nested inside the cotton ball.

- If you cannot mail the samples within 14 days, then put them in the freezer.
- Make sure the envelope is well sealed, and then placed in another envelope. Taping the opening of the envelope is recommended. Samples will arrive in better conditions for analysis if placed in a small box.

Label envelopes with:

- Your name and contact information
- Date you collected the guano
- Location description (e.g. “north side of attic”)
- Address and geographic coordinates of the roost, if possible (decimal degrees to 5 decimals preferred)

Note: Wearing an N95 or better mask is recommended when collecting guano within confined areas. Care should be taken not to inhale dust particles containing the feces of any wild animal, including bats.



Little Brown Bat Guano

Photo: Cory Olson

Please mail the package to:

**Alberta Community Bat Program
PO Box 3514
Sherwood Park, PO Main, AB T8H 2T4**

If you have any questions or comments, please contact the Alberta Community Bat Program at info@albertabats.ca