



## Alberta DNA Sampling Protocol Using Bat Guano

For Residents



Thank you for your assistance with the Alberta Community Bat Program citizen science project. One of our objectives is to learn more about the roosting behaviour and distribution of bats in Alberta. To help achieve this objective, we are identifying bat species around the province by collecting their guano (fecal droppings). A wildlife genetics laboratory can extract enough DNA from the guano to identify the bat species using DNA barcoding. Submission of guano samples is particularly valuable if a **roost report** has also been completed (see [www.albertabats.ca/citizenscience](http://www.albertabats.ca/citizenscience) for information on reporting roosts). If we select your sample for analysis, we will provide you with the results of the species identification 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

### **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.
- 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.

### **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)



*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.*

**Please mail or have an Alberta Fish and Wildlife  
office courier the package to:**

Lisa Wilkinson  
Alberta Environment and Parks  
#203, 111-54th Street  
Edson, AB T7E 1T2

If you have any questions or comments, please contact the Alberta Community Bat Program at  
[info@albertabats.ca](mailto:info@albertabats.ca)