



Protocol
Collecting guano (feces) from bat maternity colonies

The goal of this protocol is to improve our understanding of the diet of bats by collecting their guano. Bats do not completely digest the insects that they consume; therefore, small insect fragments are excreted in their feces. The molecular analysis of the fragments in at guano allows us to learn more about the diet of bats. Using this information, we can also predict the insect populations that are likely to increase due to declining populations of bats.

Bat feces are segmented, elongated and fragile (see below). In contrast, mouse feces are about the size of a grain of rice and is pointed at the two extremities. Guano often becomes attached to exterior walls, close to the opening(s) of the colony.

To collect guano:

- To collect the guano, place a plastic sheet on the ground beneath an opening in the colony. Bats usually defecate prior to entering the colony. It is preferable to collect the guano the morning after the plastic sheet was laid, once the bats have returned to their roosts. This limits disturbance to the maternity colony and have fresh guano.
- While wearing latex/rubber gloves, collect ten droppings and put them in vials or a sealable jar with 95% ethanol.
- Using a pencil, note the following information and place the label on the vials or jar.
 - Bat guano
 - Maternity colony identification number
 - Date of collection
 - Location of collection (complete address or GPS coordinate, if available)
 - Your name

To conserve guano:

- Put the vials or jar containing the guano inside a sealed bag and place everything in the freezer. It is important that guano remains frozen in all time. During the transport, a cooler and ice packs can be used.
- Please contact (valerie.simard@mffp.gouv.qc.ca in Quebec or info@albertabats.ca in Alberta) to coordinate how you can send us your samples.

Be Careful – Risk of Histoplasmosis

When bat guano accumulates outside or in a well-ventilated area, there is no danger to human health. However, the accumulation of bat guano in a closed space (for example, in an attic) is a potential health risk. The fungus (*Histoplasma capsulatum*) is sometimes present in guano and if humans breathe in dust from guano, they can get the disease histoplasmosis. To prevent the inhalation of fungal spores, a N-100 respiratory mask approved by the National Institute for Occupational Safety and Health (NIOSH) will prevent inhalation of spores. To learn more about this disease and how to remove guano that has accumulated in enclosed spaces, please consult the following link:

[Health precautions - rabies and other diseases.](#)

Photos of Bat Guano





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