

## Bats

A common misconception is that bats are disgusting, disease-ridden vermin responsible for massive human health problems.

Only large amounts of bat droppings (guano) in a confined location can be considered a threat for developing histoplasmosis. Bat guano has been prized for years by many gardeners as the finest organic fertilizer.

Guano typically includes 10% nitrogen, 3% phosphorous and 1% potassium. Sun-dried guano from natural outdoor settings unlikely includes histoplasmosis fungi. Droppings and urine deposits from bats under roosting areas have a strong, disagreeable odour which is quite characteristic. This smell will attract new bats to a roosting place even though the original inhabitants have been removed.

Before any poison is used to kill bats, make sure that you don't transgress any local protective regulations or by-laws. Bats are protected by the law in some provinces (e.g. the Cape Ordinance which lists all micro-chiropteran bats as protected), and since they are mammals, any cruelty against them can be reported to the SPCA.

One bat species – the large-eared free-tailed bat (*Otomops martiensseni*) – is also listed under the Threatened or Protected Species Act of NEMBA. Species on this list cannot be disturbed without a permit. This species can be found in KwaZulu-Natal from Ballito to Margate along the coast and inland to Pietermaritzburg.

These bats occupy roof spaces and are therefore very likely to be encountered by pest controllers in this region. This needs to be emphasized as pest controller in KZN have to be particularly aware of the presence of this protected species, and the consequences of the law which can follow prosecution if bats of this species are disturbed or killed.

In general, when pest-controllers encounter bats in roofs where they need to do fumigations for borer or other pests, it is advisable to alert the relevant regional conservation authority or bat group, or contact of reputable pest controller qualified to do bat exclusions. Bat protection groups hold annual training courses for pest controllers, and all are welcome. Humane bat exclusion can be a profitable line of work, and pest controllers should be encouraged to develop expertise in this area, as there is a large and growing public demand to have bats humanely removed.

Droppings are the most commonly viewed sign left by bats. Individual droppings are small (3.1- to 6.4 mm long), black and shiny. Under magnification they are full of shiny insect parts (legs, wings, etc.).



Bats frequently move in and out of a structure through the same opening every evening. Repeat movements at these entry points leave smudges of oil and dirt from the bat's fur, called rub marks. Look for rub marks at entry points near eaves, vents, chimneys, cracks and other openings. Occasionally the squeaking and scratching of individual bats can be heard in a wall void, ceiling and other spaces.



Bats accidentally find their way into houses in the early evening hours, when they are seeking shelter or feeding on insects attracted by doorway lights. They can enter through openings as small as 6.4- to 9.5 mm in diameter. Bats are incapable of making their own entry holes. Therefore it is important to plug all holes and use good screens and tight fitting doors prior to having a problem. Hardware cloth, aerosol foam insulation and weatherproof foam strips are excellent materials for excluding bats. An open chimney or furnace vent can be an entry point for bats, which may roost in the chimney or gain access to the interior of the structure. Install an approved stainless steel chimney cap with 5mm wire mesh to minimize access to bats.

If a colony of bats is residing in the attic or hidden area in the structure:

- Locate all exit/entry points by standing outside of the structure on a late-summer evening looking for bats that are exiting the building to go foraging at night;
- Create a one-way door by hanging 0.3 m strips of flexible quarter-inch netting over the exit/entry points;
- Fasten the netting only by the top edge just above the entries, the bats will exit hit the netting, go to the bottom of the barrier, take flight, and upon returning, will be unable to go through the netting); Allow at least one week to pass, then seal and patch all entry points;
- Do not install one-way doors or seal exit/entry points during summer months when young bats are likely to be in the roost - let them fly!).

Young bats abandoned or sealed in a structure will move about the structure looking for a way out, will starve and ultimately may cause an odour problem. If a single bat has entered a home or structure, these steps may be followed:

- Open all exterior doors and windows in the room(s) in which the bat is observed;
- Shut all doors leading to adjacent rooms to confine the bat in the area where entries are opened;
- Leave the lights on and stand motionless next to a wall or in a hallway leading to the room;
- Patiently wait as the bat swoops around the room trying to find escape route (contrary to popular belief, bats are not attracted to people's hair). It likely will fly out of the room on its own. Do not wave at or herd the bat!

If the bat is at rest on a wall (usually behind curtains or window blinds):

- Put on a pair of leather gloves;
- Get a large-mouthed glass, cup or plastic container;
- Approach the bat slowly from one side and place the container over the bat;
- Slide a piece of cardboard or stiff paper between the container and wall;
- Carry the bat in the container with the paper lid outdoors;
- Place the container with lid against the side of a tree 1.2 – 1.8 m above ground or other elevated location outdoors;
- Carefully slide the paper out from between container and tree then slowly lift the container. The bat may not fly immediately, but it will be safe from predators until it flies away.

## Fruit Bats

*Epomophorus walbergi/gambianus*



Fruit bats are never found inside roofs, these bats are sometimes found hanging outside under the eaves on the exposed roof timbers. They also sometimes use open thatched structures such as lapas and bomas. Trim branches away from windows to move the bats further away. Fruit bats messing on a wall can be discouraged by painting the wall white to make it more visible and have a light shine onto the wall surface.