

by Joel Tigner

BATS IN BUILDINGS

Having “bats in the belfry” usually means that a person is considered crazy or erratic. In modern times, few people own belfries, but may have bats in their attic, garage, or other building sites. This article is an overview of bats in buildings and how to deal with unwanted roosts.

Timing is crucial when dealing with unwanted bats. Following the guidelines below at the wrong time of year, may create new problems.

First, a bit about bats...Bats are not rodents. They don't make or enlarge holes in buildings, chew wiring, or build nests. They use a structure just as they find it, although they may cause damage. A large roost can damage a building due to accumulation of urine and droppings. Bat urine has a pungent odor, particularly noticeable in warm weather. Homeowners needn't worry about rodent-like building damage, but removing the urine odor is difficult without replacing affected building materials.

Bats use the same roosts from year to year. If you have bats this year, they will likely return next year unless you exclude them from the building.

Exclusion is the best way to deal with unwanted bats in buildings. In this process bats are sealed out of a structure. Exclusions must be performed at the right time of year and by following specific guidelines.

Why not use poisons?

Poisoning bats is illegal and irresponsible. Poisoning attempts seldom kill all the bats, leaving sickened bats that emerge, become grounded and may be retrieved by children and pets. Poisoning also fails to address the real issue - that bats are gaining access to your structure. Bats are mammals, anything



Phillip Henry

Big Brown Bats are known to winter in buildings in South Dakota.

harmful to them will be harmful to you and your pets.

In South Dakota, groups of bats in buildings are typically members of maternity/nursery roosts. Roosts can range from less than 10 to more than 1,000 bats. A typical roost size in S.D. is 20-30. Bats differ from other mammals in that they give birth once a year and generally to a single pup. Adult females come together in the early spring to give birth and rear their pups. These roosts can form from wider areas as reproductive females sometimes travel great distances to benefit from collective roosting. Considering the large area from which females may gather and the low reproductive rate of bats, destroying such roosts can have serious impacts on a population or species.

Exclusions must be completed either before females give birth or after the pups learn to fly. Optimal exclusion dates vary with weather conditions, but generally in S.D., shouldn't be done between mid-May and September 1.

Seasonal visitors

Most building-dwelling bats are seasonal visitors from spring to late

summer or early fall. Bat species that collectively roost in buildings hibernate in the winter, as there's no insect prey available. Buildings don't provide the needed conditions for bats to survive. As winter approaches, bats move from their summer roost to their hibernation sites. By the time cold weather arrives, most bats have left buildings.

NOTABLE EXCEPTION—One robust species, the Big Brown Bat (*Eptesicus fuscus*) has been known to winter in buildings in S.D., but little is known about the extent of their winter building use. Brown bats are more likely to use buildings with brick or block sections (including foundations) for hibernation.

Bats often move from their entry point to a distant location in the structure via wall cavities to find their optimal seasonally specific temperature. Bat exclusion in buildings with such features should employ a conservative treatment plan to prevent entrapment over-wintering bats. (Entrapment often causes bats to seek other ways to exit the structure, which may lead to them entering the living space and confronting human inhabitants.)

Excluding unwanted bat roosts

Those who evict bats should follow these guidelines. This should only be used in roosts of less than 100 bats. For larger roosts, contact an experienced bat exclusion specialist.

1—Identify the point of entry (there may be more than one). If there's more than one and you're certain they're connected within the structure proceed with the following directions. If you're uncertain the sites are connected, or they're in different parts of the structure, each roost should be treated separately.

Identifying the entry point usually is not difficult. Bat droppings may accumulate below the access point or a dark stain may be visible around an access point. If you have no idea where they're entering, position yourself and some friends around the outside of the house at dusk to watch for the bats' nightly emergence. Do this on a warm, calm evening. Cool temperatures or rain usually delay or prevent bat emergence.

2—Once you identify the entry point, examine the structure in daylight and identify any additional openings. This is the most important step in the entire procedure. Many openings may not be visible from ground level, particularly multi-story structures. Use binoculars or examine the structure from a ladder.

3—All openings except the bat's entry point should be sealed. Many people think bats are larger than they actually are, requiring large holes to gain access. You should fill any opening larger than 1/2 inch. (Smaller species can use the trough in the pointing between the ends of two bricks to pass under the fascia board and gain access to the soffit.) Use a good quality caulk to seal smaller holes or crevices and expanding aerosol foam for larger openings.

It's essential to identify and seal all potential entry points, except for the known entrance.

If a building has vents at the ends, make sure they are screened. If vents appear to be screened, check for un-

fastened corners or holes that may be difficult to see with a cursory look. Check around flashing for other easily missed access points. If possible, enter the attic with the lights off (during daylight hours) and note places where you can see daylight.

The most common bat entry points, in western South Dakota, are small gaps between an exterior chimney and where it adjoins the house. Fill all gaps on both sides of the chimney except for a two-inch gap where you've seen bats enter or emerge.

When finished sealing all potential entry points, the only entrance should be the identified bat access.

4—Over the final opening, install a one-way escape vent or chute. This vent is made from heavy mil plastic or poly tarp material, about 24 inches in length and shaped as a cone (similar to a windsock). Duct tape works well to hold the cone together (put the tape on the exterior of the cone). The large end of the cone should be big enough to cover the opening plus two inches surrounding the opening. The small end should have a hole about the size of your thumb. Attach the large end over the opening, be sure to completely seal all the way around the cone. Duct tape works well to attach the vent. Bats must not be able to emerge anywhere except through the small end of the funnel. The cone should hang away from the side of the house and not lie flat against the structure.

5—Leave the vent in place for 5-7 nights of good weather giving all bats an opportunity to get out. They can exit but can't get back in. After this time, remove the cone and immediately seal the opening.

If you didn't miss any other openings, your bat problem is solved.

REMEMBER: Blocking access holes without treating the entire structure can cause bats to find an alternate entry point. If done at the wrong time of year, you may exclude the adult females and entrap juveniles not yet able to fly. This leads to more determination of the adult females to find

a way to get back to their pups. This can result in bats gaining access to the human living space. In addition, when a mother doesn't return, juveniles begin searching for mom and often end up crawling into the human living space.

A NOTE OF CAUTION: Be forewarned that any activity on a ladder at an opening in the structure may startle an unseen roosting bat into flight. Don't work right in front of or beneath an access point. Such a surprise can cause a fall from a ladder. Where possible, place your ladder to one side of the work area.

Where do we go now?

Consider erecting an alternative roost location for the evicted bats, such as a "bat box." Designs and tips are available at Bat Conservation International's website www.batcon.org. Design and placement should be appropriate for the roost size and species. It's best to have the roosting alternative in place before the exclusion is performed.

Properly timing exclusion of unwanted bats from roosts in combination with providing appropriate roosting alternatives is a workable, responsible method to deal with bat-related problems.

Preventing contacts between bats and humans or bats and pets should be the goal of any control program, but this need not be done at the expense of the bats. The contribution of bats to a healthy ecosystem as the main predators of night-flying insects far outweighs any associated risks.

For more information about bats in South Dakota, consult the following website:

http://nat_hist.sdstate.edu/SDBWG/SDBWG.html

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