Bats in Your Belfry?

By Craig Stihler

Merlin D. Tuttle , Bat Conservation International

Little brown bats return to their roost in an old church at dawn.

After the sun sets and as the skies darken, bats emerge from their roosts to patrol the air space for flying insects – taking over the role of diurnal insectivorous birds. All 14 species of bats reported from West Virginia feed solely on insects. A nursing female bat can consume over half her weight in insects each night, and a large colony can have a sizable impact on local insect populations. As beneficial as this bug-control service is, it may not be much appreciated if the roost from which these bug-consumers take off is also your home. If you have an unwanted colony of bats in your attic, eves or belfry, don't wait until summer to deal with the problem. You can save yourself time, effort and frustration by addressing this problem before the bats return to their summer roost.

Two species of bats found in the West Virginia commonly roost in buildings. These are the little brown bat and the big brown bat. Although these bats probably roosted in hollow trees in the past, buildings

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Little brown bats roosting in a building.

are now their most common roosts. The little brown bat, probably the most abundant species in the state, is around 3.5 inches long while the big brown bat may be up to 4.5 inches in length.

Both species are colonial and sometimes form colonies of several hundred individuals. Little brown bats feed on a variety of smaller insects and often feed over water. Big-brown bats feed largely on June bugs and other beetles. Occasionally, one of the state's rarest bats, the Rafinesque's big-eared bat, will take up residence in abandoned buildings in the southern portion of the state. These bats have very long ears (over an inch in length). If you find any Rafinesque's big-eared bats, please notify DNR wildlife biologists at (304) 637-0245.

Although you may hear many theories on how to get bats to leave your house, the simple truth is that physically excluding them is the only method that works for the long-term. This means you need to block all possible entrances and exits at a time when the bats are not present. Unlike rodents, bats do not gnaw their way into structures, but rather use existing cracks and holes. Therefore, if you block their entrances, they will not chew their way back into your building. The key factors are determining that all bats are out of your house when you seal the openings and making sure you seal all the openings they use. Observing the house at dusk when the bats are emerging is the best way to determine where the bats are gaining access to your home. Staining and guano can often be seen below the exit sites and can be useful when trying to identify openings used by bats when the bats are not present.

To determine the suitable times for excluding bats, you need to know a little about the life history of these creatures. Both little brown bats and big brown bats hibernate during the winter. Caves and mines are often used by hibernating bats, but it is unusual to find bats in buildings during the winter. Attics that provide ideal summer homes for bats usually have unstable temperatures and are too dry for hibernating bats in the winter. Winter and spring are the best times to begin your bat-proofing activities.

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Rafinesque's big-eared bats, one of the state's rarest bats, roosting in a building. Sightings of these bats should be reported to the DNR.

Once spring arrives with warm temperatures and abundant insects, the bats emerge from hibernation, become active, and return to their summer roosts. This is usually in April in West Virginia. Females are particularly drawn to buildings because the warm conditions in attics are ideal for rearing their young. Females congregate in such places, and each will give birth to a single young (rarely more than one) called a pup. The pups, born blind and helpless, are nursed on milk and grow rapidly.

Within a month they begin to fly, but may not leave the roost. Even if you wait for all the adults to leave in the evening, young bats may be trapped inside, so you should not attempt bat-proofing during the summer. By mid-August, the young bats are becoming independent, and the colony will start to disperse and move toward their hibernation sites. In late August, it is again safe to continue your bat-proofing efforts. The later into the fall you can wait, the more likely it is that the bats will be gone.

To be sure that all the bats have left your building, you can use a "one-way-door" which allows bats to exit, but not return. If there are multiple openings used by the bats, you may want to seal all but one so you only have one existing entrance to deal with. The general principle employed is to put some sort of covering over the opening the bats are using so that it hangs down about a foot and a half below the opening. You can use plastic netting or hardware cloth. Seal the top and sides and leave the bottom open (duct tape will work).

When the bats depart in the evening they will crawl down and find their way out. However, when they

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An inexpensive "one-way-door" made of screen often prevents bats from re-entering the house.

return, they won't be able to figure out how to get back in. Because bats often use their sense of smell to locate the opening to the roost, it is best to use some sort of netting and not solid plastic sheeting to make your one-way door. If plastic is used, the smell would lead them to the bottom of the plastic and allow them to find their way back in the opening. If netting is used, the smell will lead them directly to the hole and they won't be able to get through the netting. After a few days, there should be no bats left inside and it will be safe to proceed with bat-proofing.

A number of materials can be used to seal the openings used by bats: caulk, expanding foam, hardware cloth, netting and window screening, for example. The best material to use will depend on the size and location of the opening. Once all openings

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Bat houses offer an alternative roost. Little brown bats have taken up residence in these simply constructed houses.

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Bat condo surrounded by two bat houses. Bat condos can house thousands of insect-eating bats.

are sealed, the bats won't be able to get back into your house when they return in the spring. However, the bats are likely to return to your area, and you may wish to provide them an alternate roost. This will keep the bats in your area where they will continue to consume local insects, and it may keep them from moving to your neighbor's attic and keep peace in the neighborhood.

You can buy or build a bat house. Ideally, the bat house should be put up before the bats are excluded so they will have time to find the bat house before needing to find an alternate roost. It is important to use a properly designed bat house. Bat Conservation International (www.batcon.org) has a program which certifies commercially available bat houses which are well designed and constructed. The key to a successful bat house is often in the placement. Remember, these bats are looking for a warm roost, so place the house in an area where it will receive several hours of direct sunlight each day and paint it a dark color so it absorbs as much heat as possible. The bat house should be placed 10 to 20 feet above the ground and should be mounted on the side of a building or on a pole. Bat houses mounted on trees are rarely successful. For those who are extremely ambitious, there are even plans available for building a "bat condo" that will house thousands of bats.

Bats in the wrong place may be a nuisance, but they are beneficial creatures and can be fascinating to watch as they emerge at dusk. Place your bat house where the bats can provide free entertainment. As an added bonus, the droppings they leave under the bat house can be gathered and used as fertilizer for your garden. If you know you want to exclude a colony of bats this year, it is best to begin to deal with this issue before the bats return in the spring.

Many resources are available on the Web that can assist you in bat-proofing your house or in constructing and installing a bat house. Here are a few:

Removing a bat colony from your house:

- http://www.batmanagement.com/Ordering/eviction%20package/evictpack.html
- www.dnr.state.mn.us/livingwith_wildlife/bats/exclusion.html
- www.batcon.org/index.php/education/40-bats-and-the-public/68-exclusion-guidelines.html
- www.batcon.org/index.php/education/40-bats-and-the-public/70-do-it-yourself-2.html
- www.ehow.com/how_2089063_.html

Putting up a bat house:

- www.batcon.org/pdfs/bathouses/bathousecriteria.pdf
- www.nwf.org/backyard/bathouse.cfm
- www.dnr.state.wi.us/org/LAND/er/publications/bat_house/

Removing a single bat from your house:

- www.batmanagement.com/Batcentral/eviction/evict1.html
- www.wikihow.com/Catch-a-Bat-in-Your-House
- www.dnr.state.mn.us/livingwith_wildlife/bats/removal.html

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