



Attracting Bats

WHAT ARE MY CHANCES OF ATTRACTING BATS? How will bats find my bat house? How long does it take? Can I "bait" my bat house with something to speed up the process? These are just some of the most frequently asked questions about bat houses. This page will help answer the basics about attracting bats and about being a responsible bat house landlord. For more information, please consult the *The Bat House Builder's Handbook*, available at Bat Conservation International's online catalog: www.batcatalog.com.

The odds of attracting bats are very good for well-designed, well-built bat houses mounted according to recommendations developed by the Bat House Project during 12 years of bat house research by BCI and its volunteer Research Associates across the U.S., Canada and the Caribbean. Here are a few of our latest results:

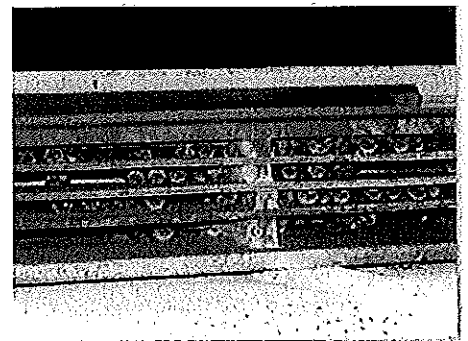
- Bats inhabited an average of 60 percent of all reported bat houses (both good and bad houses and installations) in BCI's 1999 to 2001 annual surveys.
- Occupancy in rural areas was 61 percent, compared to 50 percent for urban and suburban areas.
- 90 percent of occupied bat houses were used within two years (with 50 percent occupancy in the first year). The rest needed three to five years for bats to move in.
- Tall designs like the multi-chamber (nursery) and rocket-style houses performed best in our surveys. For example, 80 percent of 123 houses with chambers at least 25 inches tall were occupied in 2000.

ATTRACTING BATS – Bats have to find new roosts on their own. Existing evidence strongly suggests that lures or attractants (including bat guano) will *NOT* attract bats to a bat house. Bats investigate new roosting opportunities while foraging at night, and they are expert at detecting crevices, cracks, nooks and crannies that offer shelter from the elements and predators. Bat houses installed on buildings or poles are easier for bats to locate, have greater occupancy rates and are occupied two and a half times faster than those mounted on trees.

Unlike domestic animals, bats are wild and free-ranging. It is usually illegal to buy or sell them, and permits to capture and possess bats are generally limited to researchers, zoos, wildlife rehabilitators and educational organizations. Catching and relocating bats to new areas is, in any case, highly unlikely to succeed. Bats have strong homing instincts, and once released into a bat house, will attempt to return to their former home area. Consequently, placing bats in a bat house is usually futile and is not recommended. If a bat house remains unoccupied after two full years, consider repositioning or modifying the house.

TEMPERATURES – Maintaining proper roost temperatures is probably the single most important factor for a successful bat house. Interior temperatures should be warm and as stable as possible (ideally 80° F to 100° F in summer) for mother bats to raise their young. Some species, such as the big brown bat, prefer temperatures below 95° F, while others, such as the little brown bat, tolerate temperatures in excess of 100° F. Bachelor bats are less picky and may use houses with cooler temperatures. The sides of wooden or masonry structure are the best mounting sites, especially in colder climates, because temperatures are more stable than for houses attached to poles.

Bat house temperatures are influenced directly by the exterior color, compass orientation (east-, southeast-, or south-facing are generally good bets for single houses in most climates), the amount of sun exposure, how well the house is caulked and vented, and the mounting and construction materials. You may have to experiment to get the right placement and temperature range. You can always use a thermometer taped to a pole to see if temperatures are suitable inside the bat house (check the chambers high and low, and front and back).



INSTALLATION SITES – Pick installation sites with care so you don't have to move it after it is occupied. Most bat houses have open bottoms, which keeps guano from accumulating inside. Guano will, however, end up on the ground underneath, so avoid placing bat houses directly above windows, doors, decks or walkways. Bat urine may stain some finishes. Two- or four-inch spacers between a bat house and the wall, a large backboard or a longer landing area below a bat house may reduce guano deposits on the wall. A potted plant or a shallow tray or plant saucer can be placed underneath a bat house to collect bat guano for use as fertilizer in flower beds or gardens. Do not use a bucket or deep container (unless 1/4-inch or smaller mesh covers the entire top of the container), as any baby bats that fall from the bat house could become trapped inside.

MAINTAINING YOUR BAT HOUSE – Once you have attracted bats, you must maintain the bat houses to keep bats coming back year after year. Wasp and mud dauber nests should be cleaned out each winter after bats and wasps have departed. New caulk and paint or stain may be required after three to five years to guard against leaks and drafts. Bat houses should be monitored at least once a month (preferably more often) to detect potential problems such as predators, overheating, wood deterioration, etc. Any repairs or cleaning should be performed when bats are not present.

We wish you the best of luck with your bat houses.

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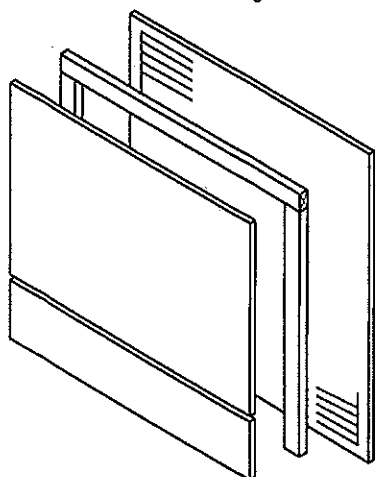
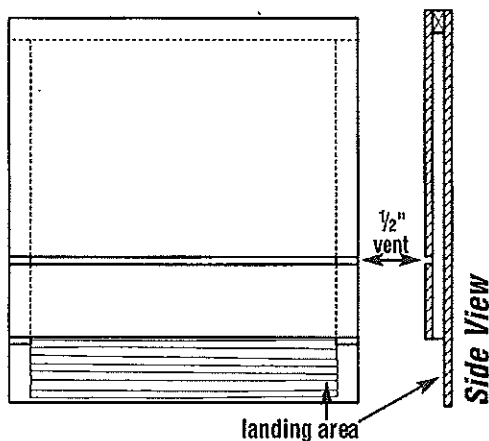
Single-chamber Bat House (wall mounted)

Materials (makes one house)

¼ sheet (2' x 4') ½" AC, BC or T1-11 (outdoor grade) plywood
 One piece 1" x 2" (¾" x 1½" finished) x 8' pine (furring strip)
 20 to 30 exterior-grade screws, 1"
 One pint dark, water-based stain, exterior grade
 One pint water-based primer, exterior grade
 One quart flat, water-based paint or stain, exterior grade
 One tube paintable latex caulk
 1" x 4" x 28" board for roof (optional, but highly recommended)
 Black asphalt shingles or galvanized metal (optional)
 6 to 10 roofing nails, ¾" (if using shingles or metal roofing)

Recommended tools

Table saw or handsaw	Caulking gun
Variable-speed reversing drill	Paintbrushes
Screwdriver bit for drill	Hammer (optional)
Tape measure or yardstick	Tin snips (optional)



More bat-house plans and additional information can be found in BCI's *Bat House Builder's Handbook*, available at www.batcatalog.com.

Construction

1. Measure and cut plywood into three pieces:
26½" x 24" 16½" x 24" 5" x 24"
2. Roughen inside of backboard and landing area by cutting horizontal grooves with sharp object or saw. Space grooves ½" to ⅝" apart, cutting ½" to ⅝" deep.
3. Apply two coats of dark, water-based stain to interior surfaces. Do not use paint, as it will fill grooves.
4. Cut furring strip into one 24" and two 20½" pieces.
5. Attach furring strips to back, caulking first. Start with 24" piece at top. Roost chamber spacing is ¾".
6. Attach front to furring strips, top piece first (caulk first). Leave ½" vent space between top and bottom front pieces.
7. Caulk all outside joints to further seal roost chamber.
8. Attach a 1" x 4" x 28" board to the top as a roof (optional, but highly recommended).
9. Apply three coats of paint or stain to the exterior (use primer for first coat).
10. Cover roof with shingles or galvanized metal (optional).
11. Mount on building (south or east sides usually best).

Optional modifications to the single-chamber bat house

1. Wider bat houses can be built for larger colonies. Be sure to adjust dimensions for back and front pieces and ceiling strip. A ¾" support spacer may be needed in the center of the roosting chamber for bat houses over 24" wide to prevent warping.
2. To make a taller version for additional temperature diversity, use these modifications: From a 2' x 8' piece of plywood, cut three pieces: 51" x 24", 33" x 24" and 12" x 24". Cut two 8' furring strips into one 24" and two 44" pieces. Follow assembly procedure above.
3. Two bat houses can be placed back-to-back, mounted between two poles, to create a three-chamber nursery house. Before assembly, cut a horizontal ¾" slot in the back of each house about 9" from the bottom edge of the back piece to permit movement of bats between houses. Two pieces of wood, 1" x 4" x 4½", screwed horizontally to each side, will join the two boxes. Leave a ¼" space between the two houses, and roughen the wood surfaces or cover the back of each with plastic mesh (see item 5 below). Do not cover the rear exit slots with mesh. One 1" x 4" x 34" vertical piece, attached to each side over the horizontal pieces, blocks light but allows bats and air to enter. A galvanized metal roof, covering both houses, protects the center roosting area from rain. Eaves should be about 3" in southern areas and about 1½" in the north.
4. Ventilation may not be necessary in cold climates. In this case, the front should be a single piece 23" long. Smaller bat houses like this one will be less successful in cool climates. However, those mounted on buildings maintain thermal stability better and are more likely to attract bats.
5. Durable plastic mesh can be substituted to provide footholds for bats. Attach one 20" x 24½" piece to backboard after staining interior, but prior to assembly.

