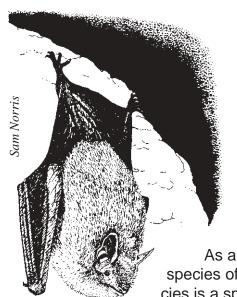
# Bats!



## What are Bats?

Bats are a group of mammals that are very specialized for their unique life styles. Contrary to popular misconceptions, bats are not rodents with wings. The scientific name for the group is "Chiroptera" meaning "handwing," and indeed, their wing is made up of elongated fingers with a thin membrane of skin stretched between them. Bats are the only mammals that can truly fly; others, such as flying squirrels, can only glide.

Diversity of Bats

As a group, bats are very diverse. There are nearly 1,000 species of bats in the world. In fact, 1 out of every 4 mammal species is a species of bat. Because bats are basically a tropical group, the diversity seen in North America is limited. About 40 species of

bats occur in the United States and 13 have been found in West Virginia.

Throughout the world, bats feed on an amazing variety of foods including fruit, pollen, nectar, frogs, fish, small mammals, blood and of course, insects. All bats found in West Virginia feed only on insects.

## Bats Are Beneficial

Bats are a highly effective natural form of insect control. Studies have shown that bats can catch and consume large quantities of insects. A little brown bat can catch 500 mosquitoes per hour and big brown bats are estimated to consume up to 3,000 to 5,000 insects in a single night! In tropical areas, bats are pollinators of important crop plants and play a role in the dispersal of seeds and the regeneration of forests.

## Do All Bats Live In Caves?

Many bats in our state use caves, at least during part of the year. Because they feed on insects, there is no food available to the bats during the coldest months. Like wood-chucks, many bats put on fat during the autumn and live off of these reserves until warm weather returns.

Caves offer ideal conditions for hibernation because they maintain fairly stable temperatures that remain cold, but above freezing, throughout the winter. To be able to move around in the total darkness of the cave, bats use an echolocation system. They emit ultrasound (above the range of human ears) clicks and listen for the echoes. The quicker the echo returns, the closer the object that reflected the sound. This system is so sensitive that objects as thin as monofilament fishing line can be detected.

Most bats spend the summer outside of the cave in hollow trees, old buildings, etc., but one species, the Federally endangered Virginia big-eared bat, raises its young in caves each summer.

## Reproduction

Unlike mice, which may have several litters of young each year, most bats produce only one or two young, known as a "pup," each summer. The young are born blind and hairless and may weigh almost a quarter of their mother's weight at birth. The females nurse their young which grow rapidly. Most young bats start to fly by the time they are one month old. Although they reproduce slowly, bats are long-lived (sometimes up to 30 years) and can produce young for several years.

## Bats and Rabies

All mammals can contract rabies and bats are no exception. The incidence of rabies in bats has often been exaggerated. In fact, a person is 10 times more likely to be struck by lightning than to get rabies from a bat. In the past 40 years, only 10 people are suspected to have contracted rabies from bats. The best rule to follow to avoid problems is never handle any wild animal, especially if it acts like it is ill.

## Bats That Occur In West Virginia

Big brown bat
Eastern pipistrelle
Evening bat
Hoary bat
Indiana bat
Little brown bat
Northern long-eared bat
Rafinesque's big-eared bat
Eastern red bat

Silver-haired bat
Small-footed bat
Virginia big-eared bat

Accidental Occurences:
Seminole bat

Sam Norris

## Bat Habitat and Bat Houses

Bats are attracted to water, such as ponds, where they feed on insects over the water, and to outdoor lights that attract flying insects. One way to attract bats to your property, or to give them an alternate roost after excluding them from your attic, is to provide them with a bat house, such as the one on the following pages developed by Bat Conservation International. Bat houses located near a permanent source of water, especially a marsh, lake or river, are by far the most likely to attract bats. The houses should be hung roughly 12-20 feet above the ground and sheltered as much as possible from the wind. There should be at least 3 feet of open space beneath the box.

Gray bat

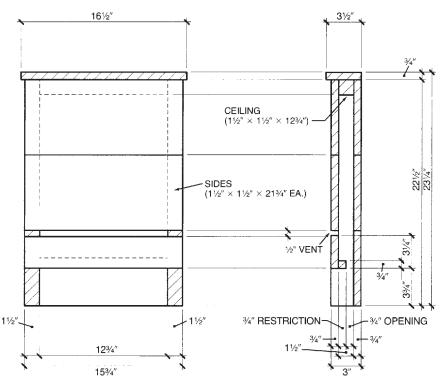
For maternity colonies, place the bat house on or very near the building where the colony was roosting before exclusion. Houses can be placed on the building, on poles or even on trees. The most important requirement is that the house receive about 7 or more hours of sunlight per day to maintain temperatures needed by the bats and their pups. Face the box southeast or southwest. Also, keep the location of the box away from a great deal of human activity or traffic, and place it where bat droppings will not be a problem. Don't be discouraged if conditions for your bat house are not perfect. Even natural roosts are seldom ideal.

If you put up a bat house and have bats using it, please report your success to:

> Bat House Report WV DNR PO Box 67 Elkins, WV 26241

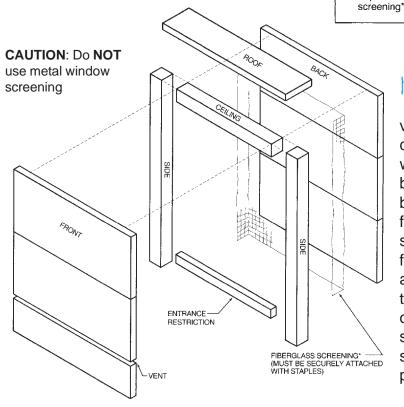
## Bat Conservation International's Official Bat House

Here are the plans for building your own bat house. If you would like more information about bat houses and how to build them, contact Bat Conservation International, PO Box 162603, Austin, TX 78716 and the West Virginia Wildlife Diversity Program.



#### Materials needed:

One 8' piece of 1"  $\times$  8" ( $\frac{3}{4}$ "  $\times$  71½" finish-cut) lumber (front and back pieces, and entry restriction)
One 5' piece of 2"  $\times$  2" ( $\frac{1}{2}$ "  $\times$  1½" finish-cut) lumber (sides and ceiling)
One  $\frac{16}{2}$ " piece of 1"  $\times$  4" ( $\frac{3}{4}$ "  $\times$  3½" finish-cut) lumber (roof)
One piece  $\frac{15}{2}$ "  $\times$  23" fiberglass window



### Hanging Your Bat House

Your house can be hung in a variety of ways depending upon the circumstances. One of the easiest ways is to drill two ¼" holes in the back of the box; the holes should be centered and about 4 inches from the top and bottom. Drive two stout nails into the desired surface for hanging; the sides of buildings are best, then poles, and then dead trees. Hang the box 15-20 feet off of the ground, if possible, and be sure it gets at least six hours of sunlight a day. It should also be painted a dark color to absorb heat.