



ASSOCIATION  
OF ZOO'S &  
AQUARIUMS

# Conservation Made Simple

RESOURCE

## How To Set Up A Wildlife Friendly Backyard

*Creating a wildlife friendly backyard is easier than most people think.  
Here are some great resources you can use to help your guests take action.*

### Websites:

[www.audubon.org](http://www.audubon.org) - click on 'Audubon at Home' off of the menu bar at the top of the page. This will take you directly to their 'Healthy Yard' resources which is a great site.

[www.nwf.org](http://www.nwf.org) - The National Wildlife Federation has a helpful site, click on 'Outside In Nature' from the main menu bar, or many of their other relevant links.

[www.enature.com](http://www.enature.com) - This site has a great section called 'Native Gardening' that provides information on what to plant, and what not to plant in your area.

[www.wildflower2.org](http://www.wildflower2.org) - More North American native plant information.

[www.fws.gov](http://www.fws.gov) - The U.S. Fish and Wildlife Service site. This site covers everything, from invasive species, to regularly used environmental contaminants, to partnering with landowners to restore habitats. This site also contains lots of downloadable information.

Many of these websites can provide you with information and activities that are specific to your region.

*To start you off, here are three activities anyone can do, in most any region,  
to help provide safe homes for wildlife...*

### Create A Successful Butterfly Garden

#### Did you know?

Not only are butterflies beautiful, they have also been proven very beneficial in pollinating many varieties of flowering plants. Many plants rely completely on butterflies for pollination.

*Creating Wildlife Friendly Families*

## Create a Butterfly Garden!

A water dish, flowers, lots of sunshine and an area with dark moist soil protected from the wind are all you need to create a butterfly garden! Remember to:

- Check your lawn at various times throughout the day to see which area receives the most sun. Butterflies, like all insects, need sunny spots to raise their body temperature.
- Avoid using pesticides around these plants. Butterflies are as affected by pesticides as much as harmful insects.
- Provide the butterflies with a water source. Any type of shallow container will work. Give fresh water often.
- Be sure to include plants for all life stages. This means nectar plants for adult butterflies and host plants for caterpillars.

## Good Butterfly Nectar Plants and Caterpillar Host Plants

Ageratum, Milkweed, Dill, Fennel, Parsley, Bee-balm, Coneflower, Passion Vine, Mustard, Hibiscus, Marigold, Salvia, Day Lily, Mallow, Phlox, Zinnia, Dahlia, Asters, Lantana, Impatiens, Butterfly Bush, Lilac, Snapdragons, Sassafras Tree, Cosmos, Blue Porterweed.

## Where have all the butterflies gone?

Due to loss of habitat, butterflies are rapidly disappearing. Wild flowers are often confused as weeds and are eliminated with herbicides. Butterflies depend on these flowers for food. When the flowers die, butterflies have no food or place to lay eggs. Butterflies are also very sensitive to air pollution. Even slight carbon monoxide from car exhaust can affect butterflies.

## What Else Can I do to Help Butterflies?

- Learn about the butterflies in your area. Keep a journal of the different species you see in your garden.
- Try to buy organically grown food at your local market. These butterfly friendly foods are produced without the use of pesticides or chemical fertilizers.
- Use natural insect-controls such as predatory insects. Ladybugs and praying mantises are nature's pest control. As carnivores, they feed on many harmful insects and serve as great protectors of your garden. Order these insects from your local garden center.
- Support organizations that are active in butterfly research and conservation.
- Reduce carbon monoxide by walking, carpooling or even purchasing a hybrid car and help keep the air clean.
- Visit [www.nwf.org](http://www.nwf.org) to learn more about Backyard Habitats.

Butterflies go through a "complete" metamorphosis. This cycle includes egg, larva, pupa and finally adult stages.

## Build A Bat Box

### TOP 7 REASONS WHY YOU SHOULD BUILD A BAT BOX

**1. BATS EAT BUGS** - without predators, insects would soon overwhelm the earth. Bats consume enormous quantities. One little brown bat can consume 1200 bugs in an hour, often 2 in a single second. A nursing mother (like your bat box will attract) will eat more than her own body weight nightly - up to 4500 insects, including pests like mosquitoes!

**2. BANANAS, PEACHES, AVOCADOS, FIGS, DATES, MANGOES, CASHEWS...** - Bats pollinate all of these fruits, which means they help these plants reproduce and grow more fruit. No bats = No Fruit!

**3. OTHER ANIMALS DEPEND ON BATS** – Bats are the “Farmers of the Rainforest” which means they are the key pollinators and seed dispersers of lots of rainforest plants on which many animals depend. Without bats, these plants could not exist. Without these plants, other animals in the rainforest could not exist. The Baobab tree is another good example. Bats are the only ones that can fly up underneath the tree’s blossoms and reach the pollen. This tree is so highly dependent on by other animals; it is called “The Tree of Life”.

**4. BATS ARE ENDANGERED** – Bats are exceptionally vulnerable to extinction, in part because they are the slowest reproducing mammals on earth for their size. Most only have one young per year.

**5. BATS HAVE BEEN ON EARTH FOR 50 MILLION YEARS!**

**6. BATS ARE MAMMALS, TOO, JUST LIKE US!**

**7. VAMPIRE BATS ONLY LIVE IN LATIN AMERICA** – Even in Latin America, they only prey on livestock, while they’re sleeping and the livestock don’t even realize they were bitten. They don’t even get sick or die because the bat drinks such a small amount of their blood. Your bat box will probably attract: little brown bats, big bats, and eastern pipistrelle. These bats eat only INSECTS and FRUIT not blood!

## Bat Houses

### Bat Reality

- There are almost 1000 species of bats. This is about 25% of all mammal species.
- Bats are not blind and don’t get tangled in people’s hair, although these are popular misconceptions.
- Many bats are able to find food and avoid obstacles at night without using their vision. They do this by using echolocation, however not all bats are able to echolocate.

### What do bats do for us?

- Insect-eating bats are very important to us as a natural source of pest control.
- Fruit-eating bats re-grow the forest by pollinating flowers and dispersing seeds.
- A single bat can eat about 600 mosquitoes in one hour!
- Bats also feed on many insects which we consider agricultural pests.

### What can we do to help bats?

- Many bats need our help! More than 50% of American bat species are in severe decline or already listed as endangered.
- By constructing a bat house near your own home, you can help increase their chances for survival by giving them a place to live.

### How to build a bat house

- You will need 6 feet of 1 x 12-inch board and ten feet of 1 x 10-inch board. (DO NOT use any board that has been chemically treated.)
- Spacing between the partitions should remain the same. This design has varied crevice sizes most often used by bats in the United States.
- All inner surfaces of the bat house must be rough or horizontally grooved so that the bats can get a firm foothold.
- Use rough lumber and turn the rough sides inward. Cut small horizontal grooves at 1/2-inch intervals on the smooth sides of all partitions.
- Apply a bead of silicone caulk along all exterior joints to prevent heat loss. This holds in the bat’s body heat, increasing the probability of occupancy.

- Place the house 10-15 feet above the ground. Bat houses placed on the side of the building or on a pole seem to be the most attractive to bats. Try to avoid placing the bat house in a tree because of the threat of predators.
- The bat house should face the east or the southeast to catch the morning sun.
- If the bat house is placed near a natural water source this may increase your chance of attracting bats.
- Be patient! It may take some time for the bats to move into their new home. Do not open the house to check for bats. Guano, or bat droppings will be visible once the bats have taken residence.

*For more information about bats or to purchase a ready-made bat house, contact:*

Bat Conservation International  
PO Box 162603  
Austin, TX 78716-2603  
[www.batcon.org](http://www.batcon.org)

## Build A Birdhouse

### Birdhouses

Birdhouses are an easy way to have more birds around your home or in your woodlot. In this fact sheet, we explain how to build houses for different kinds of birds and provide tips for setting them up. As lands become more developed, birdhouses become more important. On this sheet is a pattern for a birdhouse, and a list of measurements so you can adapt the pattern for different species. Tailoring the house you build to the needs of species you want to attract will increase your chances of success.

For all houses, here are some general guidelines:

1. Provide a hinged side or roof so you can easily clean the house each spring—early March is a good time. Use rust-proof hinges to make the task easier. Keep in mind that raccoons can open a hook and eye.
2. Drill at least four 1/4-inch drain holes in the bottom of every house, and two 5/8-inch ventilation holes near the top of each side of the house.
3. Provide a roof with at least a two-inch overhang on the front to protect the entrance hole from wind-driven rain, and to prevent cats from reaching in from above.
4. The sides of the house should enclose the floor to keep rain from seeping into the house and nest. Recess the floor 1/4-inch up from the bottom to further prevent rotting caused by moisture.
5. Don't put perches on any bird house. Take them off houses that you purchase. The only birds that prefer them are starlings and house sparrows.
6. Keep entrance holes on songbird houses 1 3/8 inches or smaller to keep out starlings and house sparrows. (Purple martins are an exception.)
7. Space boxes at least 25 feet apart (300 feet for bluebird houses) to reduce conflicts. Most birds are territorial and protect the area around their nests. Goldeneye mergansers and wood ducks are not territorial, so you can place their houses closer together. Purple martins live in colonies and prefer 'apartment houses' to single-family houses.

- 8.** Wood is the best material to use. Do not use pressure-treated lumber because when it gets wet it can give off vapors that are poisonous to birds. Preservatives, such as paint or stain, can be used on the outside of the box, especially the back, but not on the inside. Do not use creosote as a preservative.
- 9.** Do not use tin cans, milk cartons or metal for nest boxes. They can overheat and kill the eggs and young birds. The only exceptions are commercial aluminum martin houses.
- 10.** Other animals may take up residence in your boxes, including mice, squirrels, bees and wasps. If unwanted, remove them. Be very careful not to get stung, otherwise put up a few extra boxes to make room for both the expected and unexpected tenants.

#### [Dimensions for Birdhouses](#)