

# Nest Box Information

## Nest Box Dimensions

Species	Box floor inches	Box height inches	Entrance height inches	Entrance diameter inches	Placement height feet
American Robin*	7x8	8	---	---	6-15
Eastern & Western Bluebird	5x5	8-12	6-10	1-1/2	4-6
Mountain Bluebird	5x5	8-12	6-10	1-1/2	4-6
Chickadees	4x4	8-10	6-8	1-1/8	4-15
Titmice	4x4	10-12	6-10	1-1/4	5-15
Ash-throated Flycatcher	6x6	8-12	6-10	1-1/2	5-15
Great Crested Flycatcher	6x6	8-12	6-10	1-3/4	5-15
Phoebes*	6x6	6	---	---	8-12
Brown-headed Pygmy and Red-breasted Nuthatch	4x4	8-10	6-8	1-1/4	5-15
White-breasted Nuthatch	4x4	8-10	6-8	1-3/8	5-15
Prothonotary Warbler	5x5	6	4-5	1-1/8	4-8
Barn Swallow*	6x6	6	---	---	8-12
Purple Martin	6x6	6	1-2	2-1/4	6-20
Tree and Violet-Green Swallows	5x5	6-8	4-6	1-1/2	5-15
Downy Woodpecker	4x4	8-10	6-8	1-1/4	5-15
Hairy Woodpecker	6x6	12-15	9-12	1-1/2	8-20

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Lewis's Woodpecker	7x7	16-18	14-16	2-1/2	12-20
Northern Flicker	7x7	16-18	14-16	2-1/2	6-20
Pileated Woodpecker	8x8	16-24	12-20	3x4	15-25
Red-Headed Woodpecker	6x6	12-15	9-12	2	10-20
Yellow-bellied Sapsucker	5x5	12-15	9-12	1-1/2	10-20
Bewick's and House wrens	4x4	6-8	4-6	1-1/4	5-10
Carolina Wren	4x4	6-8	4-6	1-1/2	5-10
Barn Owls	10x18	15-18	4	6	12-18
Screech Owls and Kestrel	8x8	12-15	9-12	3	10-30
Osprey	48x48 platform				
Red-tailed Hawk and Great Horned Owl	24x24 platform				
Wood Ducks	10x18	10-24	12-16	4	10-20

\*Use nesting shelf, platform with three sides and an open front

Now that you have the correct dimensions for your bird house, take a look at how to make it safe: ventilation, drainage, susceptibility to predators, and ease of maintenance.

### Ventilation

Without air vents, boxes can turn into bird ovens. There are two ways to provide ventilation: leave gaps between the roof and sides of the box, or drill 1/4" holes just below the roof.

### Drainage

Water becomes a problem when it sits in the bottom of a bird house. A roof with sufficient slope and overhang offers some protection. Drilling the entrance hole on an upward slant may also help keep the water out.

## **Nest Box Information**

Regardless of design, driving rain will get in through the entrance hole. You can assure proper drainage by cutting away the corners of the box floor and by drilling 1/4 inch holes in the box floor. Nest boxes will last longer if the floors are recessed about 1/4 inch.

### **Entrance Hole**

Look for the entrance hole (and exit) hole on the front panel near the top. A rough surface both inside and out makes it easier for the adults to get into the box and, when it's time, for the nestlings to climb out.

If your box is made of finished wood, add a couple of grooves outside below the hole. Open the front panel and add grooves, cleats, or wire mesh to the inside.

Never put up a bird house with a perch below the entrance hole. Perches offer starlings, house sparrows, and other predators a convenient place to wait for lunch.

Don't be tempted by those beautiful duplexes or houses that have more than one entrance hole. With the exception of purple martins, cavity-nesting birds prefer not to share a house. While these condos look great in your yard, starlings and house sparrows are the only birds inclined to use them.

### **Accessibility**

Bird houses should be easily accessible so you can see how your birds are doing and, when the time comes, clean out the house.

Part of being a responsible bird house landlord is your willingness to watch out for your tenants. Monitor your bird houses every week and evict unwanted creatures: house sparrows, starlings, rodents, snakes, and insects.

Be careful when you inspect your bird boxes. You may find something other than a bird inside. Don't be surprised to see squirrels, a mouse, a snake, or insects. Look for fleas, flies, mites, larvae, and lice in the bottom of the box.

If you find insects and parasites, your first reaction may be grab the nearest can of insect spray. If you do, use only insecticides known to be safe around birds: 1% rotenone powder or pyrethrin spray. If wasps are a problem, coat the inside top of the box with bar soap.

Here's how to check your nest boxes:

Watch the nest for awhile. If you don't see or hear any birds, go over and tap on the box. If you hear bird sounds, open the top and take a quick peek inside. If everything's okay, close the box. If you see problems (parasites or predators), remove them and close the box.

Here's where a bird house with easy access makes the job simple. Most bird houses can be opened from the top, the side, the front, or the bottom.

## **Nest Box Information**

Boxes that open from the top and the front provide the easiest access. Opening the box from the top is less likely to disturb nesting birds. It's impossible to open a box from the bottom without the nest falling out. While side- and front-opening boxes are convenient for cleaning and monitoring, they have one drawback: the nestlings may jump out.

If this happens, don't panic. Just pick them up and put them back in the nest. Don't worry that the adults will reject the nestlings if you handle them. That's a myth. Most birds have a terrible sense of smell.

If you clean out your nest boxes after each brood has fledged, several pairs may use the nest throughout the summer. Many cavity nesting birds will not nest again in a box full of old nesting

In the fall, after you've cleaned out your nest boxes for the last time, you can put them in storage or leave them out. Gourds and pottery last longer if you take them in for the winter. You can leave your purple martin houses up, but be sure to plug the entrance holes to discourage starlings and house sparrows.

Leaving your wood and concrete houses out provides shelter for birds, flying squirrels, and other animals during winter.

Each spring be sure to clean out all houses you've left out for the winter.

### **Limiting Predator Access**

Proper box depth, roof, and entrance hole design will help minimize predator (raccoons, cats, opossums, and red squirrels) access. Sometimes all it takes is an angled roof with a three-inch overhang to discourage mammals.

The entrance hole is the only thing between a predator and a bird house full of nestlings. By itself, the 3/4" wall isn't wide enough to keep out the arm of a raccoon or house cat.

Add a predator guard a 3/4 inch thick rectangular wood block, to thicken the wall, and you'll discourage sparrows, starlings, and cats.

### **BIRD HOUSE PLACEMENT**

Where you put your bird house is as important as its design and construction. Cavity nesting birds are very particular about where they live. No matter how perfect your nest box, if you don't have the right habitat, the birds aren't likely to find it.

Not everyone has the habitat for a wood duck, purple martin, or screech owl. On the other hand, just about anyone can attract a robin, titmouse, wren, or chickadee.

Let's assume you've built or bought the "perfect" house. You put it out in your backyard in February. Months pass, and not one bird has landed on it. What's wrong?

## Nest Box Information

It may be that you don't have the right habitat, or it may be where you put the house.

There's lots you can do to modify your land to attract the birds you want to see. It can be as simple as putting out a bird bath or as complicated as planting fruit-bearing shrubs or installing a pond with a waterfall.

But it's much easier just to identify the birds most likely to take to your backyard as it is and put the appropriate nest box in the right place.

Should you hang it from a tree limb, nail it to a fence, or mount it on a pole or a tree trunk?

There's a wide range between how high and low you can place a nest box. Pick a height that's convenient for you. After all, you'll want to watch what goes on and keep the box clean. If you want to watch chickadees from your second floor window or deck, fifteen feet is not unreasonable but it's a lot easier to clean out a box at eye level.

Here are some tips on where to put bird houses:

- houses mounted on metal poles are less vulnerable to predators than houses nailed to tree trunks or hung from tree limbs.
- use no more than four small nest boxes for any one species or one large box per acre.
- put about 100 yards between bluebird boxes and 75 yards between swallow boxes (if you have both species, "pair" the houses with one bluebird box 25 feet from a swallow box. Put the "pair" 100 yards away.)
- don't put bird houses near bird feeders.
- don't put more than one box in a tree, unless the tree is extremely large or the boxes are for different species.
- if you have very hot summers, face the entrance holes of your boxes north or east to avoid overheating the box.

## MATERIALS

Of all the available building materials, wood is about as good as you can get. It's durable, has good insulating qualities, and it breathes. Three-quarter-inch-thick bald-cypress and red cedar are recommended. Pine and exterior grade plywood will do, but they're not as durable.

It makes no difference whether the wood is slab, rough-cut or finished, as long as the inside has not been treated with stains or preservatives. Fumes from the chemicals could harm the birds.

There's no need to paint cypress and cedar, but pine and plywood houses will last longer with a coat of water based exterior latex paint. White is the color for purple martin houses. Tan, gray, or dull green works best for the other cavity nesting species. The dull, light colors reflect heat and are less conspicuous to predators. Don't paint the inside of the box or the entrance hole.

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Regardless of which wood you select, gluing all the joints before you nail them will extend the life of your bird house. Galvanized or brass shank nails, hinges, and screws resist rusting and hold boxes together more tightly as they age.

Resist the temptation to put a metal roof on your bird house. Reflective metal makes sense for martin houses up on a sixteen-foot pole, but when it's tacked onto a roof of a wood chickadee house, the metal is more likely to attract predators.

Natural gourds make very attractive bird houses. They "breathe," and because they sway in the wind are less likely to be taken over by house sparrows and starlings.

Grow your own gourds and you'll have dozens to choose from in the years ahead. If you don't have the space to grow them, a coat of polyurethane or exterior latex (on the outside only) will add years to the one you have.

Properly designed pottery, aluminum (for purple martins only), concrete, and plastic houses will breathe and are durable, but don't drop them.

Be sure to provide ventilation, drainage, and easy access for maintenance and monitoring. Concrete (actually a mix of concrete and sawdust) offers protection other houses cannot: squirrels cannot chew their way in.