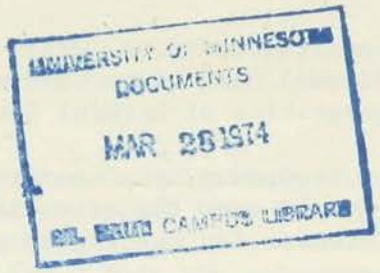
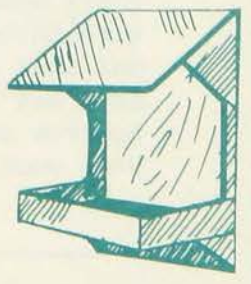
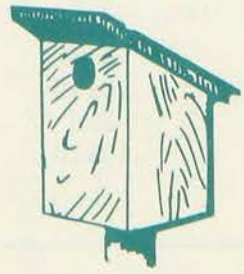
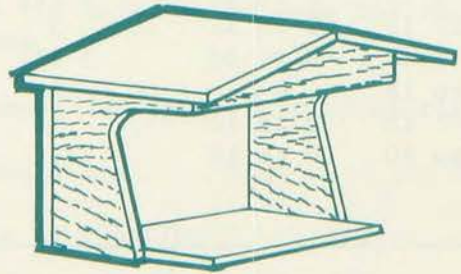
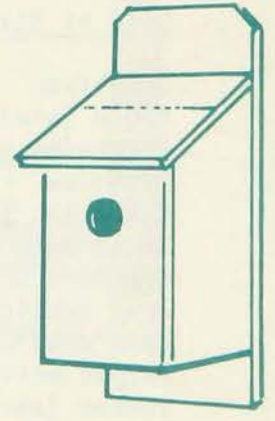
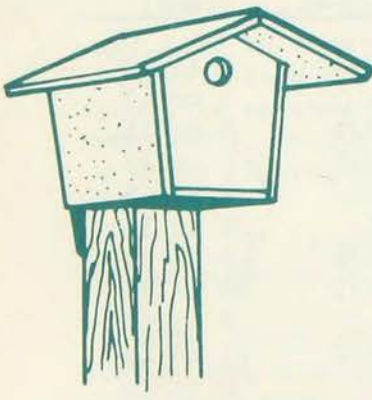


① Minn. Ext. Service



Guide to Birdhouse Building

Jon Willand



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Birds are great companions. They add charm to your home and farm with their graceful forms, harmonious colors, sprightly actions, and beautiful songs. They also eat quantities of harmful insects.

By making a birdhouse, you can attract birds to your home. But before you begin, you should know the essentials for all birdhouses and that certain birds have preferences for nesting boxes.

Principles of Nest Box Construction

Plan

Use your imagination or follow a set of commercial plans. Correct dimensions are important, but do not worry if your only piece of lumber is a fraction of an inch too narrow. After all, birds would have become extinct long ago if they had such rigid requirements. Floor space, depth, and the distance from hole to floor are all important, but the entrance-exit hole size is the vital dimension.

Dimensions of Nesting Boxes

Kind of Bird	Floor of cavity (inches)	Depth of cavity (inches)	Entrance-exit hole above floor (inches)	Diameter of entrance (inches)	Height above ground (feet)
Bluebirds	5x5	8	6	1 3/4	5 to 10
Robin (shelf)*	6x8	8	-	-	5 to 15
Chickadee	4x4	8 to 10	6 to 8	1 1/8	5 to 15
Titmouse	4x4	8 to 10	6 to 8	1 1/4	5 to 15
Nuthatch	5x5	8 to 10	6 to 8	1 1/4	6 to 20
House wren	4x4	6 to 8	1 to 6	1	6 to 10
Carolina wren	4x4	6 to 8	1 to 6	1 1/8	6 to 10
Tree swallow	5x5	6	1 to 5	1 1/2	10 to 15
Barn swallow(shelf)*	6x6	6	-	-	8 to 12
Purple martin	6x8	6	1 to 2	2 1/2	12 to 20
Phoebe (shelf)*	6x6	6	-	-	8 to 12
Crested flycatcher	6x6	8 to 10	6 to 8	2	8 to 20
Flicker	7x7	16 to 18	14 to 16	2 1/2	6 to 20
Red-headed woodpecker	6x6	12 to 15	9 to 12	2	12 to 20
Downy woodpecker	4x4	8 to 10	6 to 8	1 1/4	6 to 20
Hairy woodpecker	6x6	12 to 15	9 to 12	1 1/2	12 to 20
Screech owl	8x8	12 to 15	9 to 12	3	10 to 30
Saw-whet owl	6x6	10 to 12	8 to 10	2 1/2	12 to 20
Barn owl	10x18	15 to 18	4	6	12 to 18
Sparrow hawk	8x8	12 to 15	9 to 12	3	10 to 30
Wood duck	10x10	15 to 20	10 to 18	4	12 to 20

* one or more sides open

Materials

Sheet metal can be used for trim; however, it is not recommended for houses because sheet metal gets too hot in the sun. A metal house must be placed in the shade.

Wood is the best material for houses. It is easy to work with and does not conduct excessive heat. Use sawed lumber, sawmill slabs, pieces of tree trunks, or sawed lumber with bark nailed on. Redwood is recommended, at least for the floor, though it may be too expensive for the entire house.

Always use good workmanship and make a strong, solid structure.

Finishing

There are four main finishes:

- * No finish--has rustic appearance but weathers fast.
- * Wood sealer--seals wood cells from water, should be applied to both interior and exterior.
- * Paint--subdued tones such as brown, green, or gray are usually best. Do not use glossy enamels. Paint designed for duck hunting boats has good color tone and durability.
- * Stain--good for rustic effect. Apply wood sealer after stain.

Rain Protection

To insure protection from rain:

- * Give pitch to roof.
- * Make all joints tight.
- * Drill several 1/8-inch diameter drainage holes in floor.
- * Slant the entrance-exit hole slightly upward if wood is reasonably thick.

Heat Protection

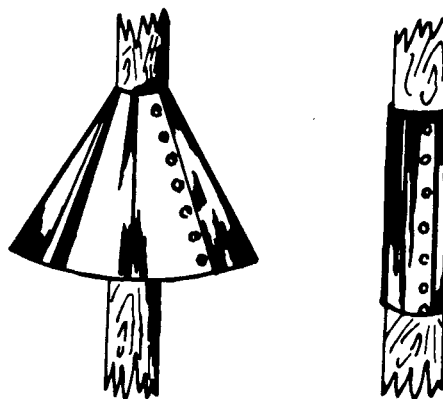
To insure protection from heat:

- * Bore 1/4-inch diameter ventilation holes at top of side walls or back but not in the roof or below the level of the entrance hole.
- * Paint unshaded houses, such as martin houses, white to reflect heat.
- * Place dark colored houses in the shade.

Protection from Enemies

Place houses in reasonably safe locations. Control enemies such as English sparrows and starlings whenever possible. To prevent cats and squirrels from entering:

- * Plant multiflora roses at the base of the pole.
- * Put up a metal guard.
- * Use a metal pole.



Metal Guards

Cleaning

Permanent houses should be cleaned at least once a year. Wash them with a strong disinfectant to kill parasites. Avoid disinfectants which leave a lasting odor which may discourage nesting.

Several building designs make cleaning easy:

- * Side or floor attached with brass screws.
- * Floor or roof hinged.
- * Sliding floor.
- * Swing-out floor--put one pivot screw at each side of floor toward rear, a third screw holds the floor at front of house. This is cheaper than brass hinges. Iron hinges tend to rust shut.
- * Detachable roof.

Mounting

Each house must be constructed with a secure means of mounting it to a post or tree.

General Tips

1. When building your house, remember that birds are not impressed with ornate and elaborate designs.
2. Make only one entrance-exit hole for each room and do not make houses with more than one apartment, except for martin houses, or the birds will fight over space. Do not put single houses within 20 feet of each other.
3. Remember that birds prefer round entrance-exit holes.
4. Do not place the entrance-exit hole toward the bottom of the box, except in martin houses, because birds need room to build their nests and they like to be out of sight while incubating their eggs. The hole should be well above the center (see page 2). Some birdhouse builders roughen up, groove, or cleat the inside of the front wall to help the young birds climb out. This is most important for deep woodpecker and wood duck houses.

5. A perch is often more of a hindrance than a help. Many songbirds fly directly to the hole and perch on the edge. A long or large perch may allow an English sparrow to bother the occupants of the house.

6. Make porches on a martin house at least 3 inches wide. Attach a railing no more than 1/4-inch high. Martin houses should be placed in clearings because martins circle before landing.

7. Keep English sparrows out of houses for migratory birds during the winter by putting strips of wood or hardware cloth over entrance-exit holes.

8. Do not make ventilation holes lower than the entrance-exit hole or young birds might suffer from draft.

9. Woodpeckers and wood ducks need a 2- to 3-inch depth of sawdust or wood chips on the floor. Woodpeckers prefer their houses in trees not surrounded with brush.

10. Do not build houses for English sparrows; they are enemies of songbirds.

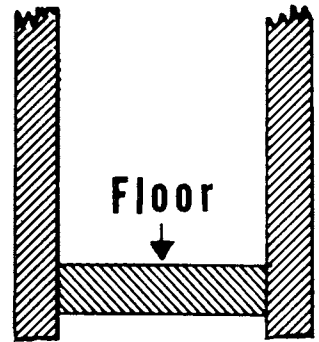
11. Erect bluebird houses along fencelines between woods and pastureland but away from farm buildings.

12. Sometimes the floor lasts longer if it is recessed above the bottom of the walls. During alternate thawing and freezing in the spring, the house will not be cracked by freezing water.

13. Place houses out in the fall, then birds can get used to them before migration. If you make houses during the winter, put them out as early as possible so they will lose paint smells and become weathered. Even at that, birds do not always occupy a house the first season it is up.

14. It is best for a birdhouse to face south, or as close to it as possible.

15. Mount the birdhouse on a pole preferably, but if you must use a tree, do not hang it on the end of a branch. Birds do not like swinging houses.



Recess Floor Slightly

Scorecard for Birdhouse Judging

The following scorecard will help you decide how well you have made your birdhouse. If you make a birdhouse for the county fair, this checklist will probably be used.

	Percentage Points
Fitness for specific kind of bird.	35
Workmanship.	25
Ease of cleaning	25
Appearance, design, color.	15
TOTAL	<u>100</u>



FOUR IMPORTANT POINTS

Always remember the following four points for your birdhouse:

1. Have proper dimensions for the bird expected to use it.
2. Provide for easy cleaning.
3. Have properly placed ventilation and drainage holes.
4. Paint with subdued, not loud or glossy colors.

Good Luck!

Where to Get Further Information

"Attracting Birds," by W. L. McAtee (Conservation Bulletin No. 1), 15¢ from U. S. Government Printing Office, Washington, D. C. 20402.

Bird Houses, by L. Day Perry and Frank Slepicka, \$1.80 from Charles A. Bennett Co., Inc., 809 West Detweiller Drive, Peoria, Illinois 61614

"Bird Houses and Feeders," by Roger T. Peterson and John K. Terres, 25¢ from National Audubon Society, 1130 Fifth Avenue, New York, New York 10028

"Bird Houses, Baths, and Feeding Shelters: How to Make and Where to Place Them," by Edmund J. Sawyer, 50¢ from Cranbrook Institute of Science, Bloomfield Hills, Michigan 48013.

Bird Watching, Housing and Feeding, by Walter E. Schutz, \$3.75 from Bruce Publishing Co., 400 North Broadway, Milwaukee, Wisconsin 53201.

"Cultivate Your Garden Birds," by Anne W. Dodge and others, 40¢ from Minnesota Museum of Natural History, University of Minnesota, Minneapolis, Minnesota 55455

"Homes for Birds," by E. R. Kalmbach and others (Conservation Bulletin No. 14), 20¢ from U. S. Government Printing Office, Washington, D. C. 20402.
(This is the standard booklet.)

Leaflets on attracting birds, birdhouse dimensions, and feeder plans, free, send stamped envelope to Minneapolis Bird Club, 5148 Twenty-ninth Avenue South, Minneapolis, Minnesota 55417.

"Wild Birds . . . In your Garden," by Henry A. Hunsicker, 35¢ from T.F.H. Publications, Inc., 245 Cornelison Avenue, Jersey City, New Jersey 07302.

The author, Jon Willand, is a 4-H alumnus from Lac qui Parle County who is knowledgeable about well-constructed birdhouses. We are indebted to him and his adviser, W. J. Breckenridge, director, James Ford Bell Museum of Natural History, University of Minnesota, for the development of this bulletin.

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