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Feeding and Attracting Wildlife  
Michigan State University  
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G.R. Dudderar and R. W. George, Fisheries and Wildlife  
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*Discontinued.*

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PREVIOUS EDITION  
O.K. FOR DISTRIBUTION

# Feeding & Attracting Wildlife



# Feeding & Attracting Wildlife

By G. R. Dudderar and R. W. George, Extension Specialists, Department of Fisheries and Wildlife

You can make your yard a wildlife sanctuary. All you need to do is provide the food, cover, and water that wildlife needs to survive. Your sanctuary will pay big dividends, daily!

You will learn how wildlife is dependent on habitat for survival. You will see first-hand how wild animals live, behave, reproduce, and die. You will begin to understand some of the relationships between man and wildlife and appreciate roles wildlife play in the environment.

You will enjoy the wonderful phenomena that only wildlife can provide. You will see the brilliant red of the cardinal or the brassy iridescence of the pheasant, hear the reassuring spring song of the song sparrow, laugh at the comical cavorting of rabbits on moonlit snow, fuss at the plump-squirrel that raids your birdfeeder, wonder at the tiny chipping sparrow's ability to survive sub-freezing temperatures, or cry over the death of a young robin that didn't quickly learn the hazards of its environment. Your yard will become a stage that will provide you a living drama of humor, tragedy, and adventure with continually changing actors and scenes.

You will have the personal satisfaction of knowing that you are helping to provide for the survival of the other forms of life with which we share this earth.



## REQUIREMENTS OF WILDLIFE

Wildlife will be attracted to your yard and live there if you supply its three basic needs—food, cover, and water.

**Food:** A variety of foods will insure an abundance of wildlife. Food can be provided naturally by planting a variety of food producing grasses, flowers, shrubs, and trees. Food can be provided artificially by a variety of feeding stations for both mammals and birds.

**Cover:** Protection from the elements and places to rest and raise young are essential components of any wildlife sanctuary. Tall grass and wildflowers, shrubs, brush piles, and trees—dead and alive—provide a variety of natural cover for wildlife. Artificial nesting boxes and houses can be used to supplement existing cover.

**Water:** In most cases, water must be provided artificially by devices such as bird baths. Simple or fancy, they are always attractive to birds.

This publication will tell you how you can provide these basic requirements for wildlife. It will be up to you to choose the methods most appropriate for your situation.

**Some Hints:** There is much you can do to increase your enjoyment of your wildlife sanctuary. Outdoor blinds or fine mesh curtains will permit closer observation. Floodlights will open a new nighttime experience for you. In addition, your experiences will be more meaningful if you learn to identify your wildlife, to recognize its calls and songs, to keep track of numbers, species relationships, and behavior, to photograph your animals and to recognize tracks, and even to imitate their calls.

Don't be discouraged by initial failure or too many animals. Patience and experimentation will help you find the best location for the purple martins house, how to deal with over-abundant starlings, or how to prevent rabbits from consuming your food or flower gardens. If you can't solve the problem yourself, assistance is available from a wide variety of sources, such as the MSU Extension Service, the Michigan DNR, and the U.S. Fish and Wildlife Service.

### ACKNOWLEDGEMENT

*The authors express appreciation to the Carl G. Fenner Arboretum, City of Lansing, Parks and Recreation Department, and especially Joan Brigham, naturalist at the Arboretum for her input in the original publication. Birdhouse and feeder plans were prepared by Charles Shick, Michigan Department of Natural Resources.*

## NATURAL FOOD AND COVER

I. *Select a small, convenient portion of your backyard and leave it alone.* Don't do anything to it. The first year or two, it will consist of tall grass, but soon you will be treated to a beautiful display of wildflowers as well: white daisies, astors, Queen-Annes-lace, yarrow, and strawberry; yellow primrose, mullein, astors, coneflowers, and goldenrod; red phlox, clover, and thistle; and blue chockory, astor, and gentian. These plants will provide food and cover for many kinds of animals. To increase the variety of plants, stretch a rope across this plot; birds sitting on the rope will deposit new seeds in their droppings.

II. *Plant food and cover bearing flowers, vines, shrubs, and trees.* \* These plants should be planted in clumps or rows where possible. If planted singly, the planting location should be where pruning is not essential.

### Flowers

|            |            |
|------------|------------|
| jewelweed  | geranium   |
| bee-balm   | nasturtium |
| columbine  | sunflower  |
| coral bell | cosmos     |

### Vines

|                      |                  |
|----------------------|------------------|
| trumpet creeper      | wild grape       |
| Japanese honeysuckle | Virginia creeper |
| bittersweet          |                  |

### Low Shrubs (5 ft. to 10 ft.)

|             |                |
|-------------|----------------|
| blackberry  | barberry       |
| blueberry   | viburnum       |
| snowberry   | aromatic sumac |
| huckleberry |                |

### High Shrubs (10 ft. to 20 ft.)

|                  |                    |
|------------------|--------------------|
| bush honeysuckle | highbush cranberry |
| autumn olive     | sumac              |
| elderberry       | spreading juniper  |
| dogwood          | firethorn          |
| winter berry     | multiflora rose    |
| russian olive    | cotoneaster        |

### Small Trees (20 ft. to 30 ft.)

|           |                                      |
|-----------|--------------------------------------|
| crabapple | mountain ash                         |
| hawthorne | pin, choke, and other small cherries |

### (Continued)

\* There are usually many varieties available for most of the plants listed. You will want to choose the variety most appropriate to your tastes and your situation.

## Large Trees (30 ft. +)

### evergreen

white pine  
spruce  
red cedar  
jack pine  
hemlock

### deciduous

beech  
oak  
mulberry  
birch  
black cherry  
hickory

## ADDITIONAL REFERENCES

*Audubon Guide to Attracting Birds*, Edited by John Baker, Doubleday

Cranbrook Institute. *Bird Houses, Baths, and Feeding Shelters*, Bloomfield Hills, Michigan

Davison, Vernon. *Attracting Birds: from the Prairies to the Atlantic*, Thomas Y. Crowell Company, New York

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Hillcourt, William. *Field Book of Nature Activities and Conservation*, New York, G.P. Putnam's Sons.

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Michigan Audubon Society. *Enjoying Birds in Michigan*, 2000 North Westnedge, Kalamazoo, Michigan 49001

National Geographic. *Song and Garden Birds*, Washington, DC

Pettit, T.S. *Birds in Your Backyard*, New York, Harper Brothers

Sawyer, E.J. *Bird Houses, Baths and Feeding Shelters*, Bloomfield Hills, Cranbrook Institute of Science

Thomas, J.W., Brush, R.O., and DeGraef, R.M. *Invite Wildlife to Your Backyard*, National Wildlife Federation Reprint, 1412 16th St., N.W., Washington DC 20036

USDA. *Invite Birds to Your Home—Conservation Plantings for the Midwest*, PA-982, Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402

USDA. *Attracting and Feeding Birds*, Conservation Bulletin No. 1, *Homes for Birds*, Conservation Bulletin No. 14, Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402

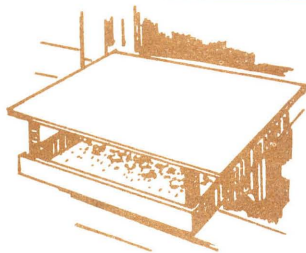
## ARTIFICIAL FEEDING

Start feeding in the fall when weather cools to keep some of the summer residents from deciding to move south. Birds are more likely to stay if they find dense shrubbery for shelter, and open water when the ground is dry and frozen. Once you start feeding, keep it up—for birds soon come to depend on this steady supply.

Should it disappear for long in midwinter, they could be in serious trouble. Put feeders where you can watch them. You may as well enjoy the show. Birds soon become bold enough to come even to window ledges. Don't begrudge sparrows a share—their friendly com-mo-tion around a feeder attracts more desirable birds.

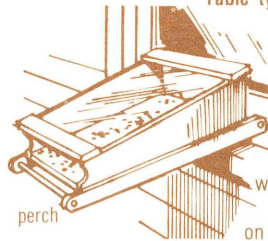
### Types of Feeders

*...for loose grain, other food in particles*



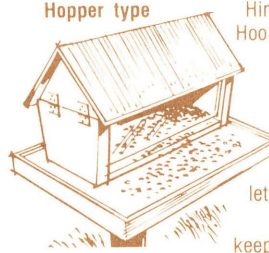
#### Covered shelf

Attached to outside window sill; feed is spread on shelf. Low edging around keeps feed from being scratched or blown off.



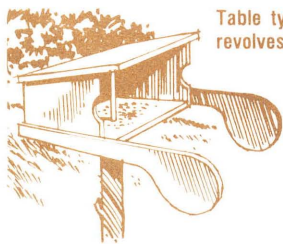
#### Table type with glass cover

Glass top, sloped to shed water, lets you see through from above—an ideal feeder to set on outer part of a window air conditioner. Can also be mounted on shelf bracket or post.

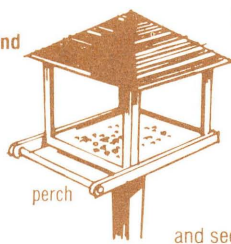


#### Hopper type

Hinged; top lifts for filling. Hook on other end prevents wind from lifting roof. Mount on shelf or post glass sides show when hopper is empty 1/4" space below glass lets feed fall onto platform rim around keeps feed from blowing off

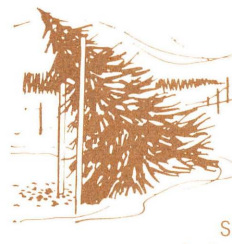


#### Table type that revolves away from wind



#### Stationary food house with three glass sides

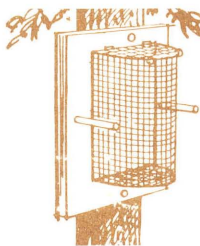
open side away from prevailing winter wind glass on three sides lets you watch birds and see when feeder is empty



#### Ground shelter for scratch feed. Attracts quail, meadowlarks, juncos, sparrows.

Lean old Christmas trees, corn stalks or boards from north to south against H frame creating leanto shelter. Scatter scratch feed into opening on ground. Shelter keeps snow from covering feed, north wind from blowing it away.

*...for suet and seed cakes*



#### Hardware cloth suet board is an economical feeder so you can have several.

Attach well off the ground to tree or post. top lifts for filling dowel pins for perches holes drilled top and bottom to nail through to tree or post



#### Bird Lollipop

Insert string thru bottom of papercup. Fill cup with mixture of melted suet and seed. When suet hardens, cut away papercup. Suspend from tree branch, windowsill, etc.



#### Bird stick

hook hangs over line or branch drill 1" holes thru 2" x 2" — stuff with warm suet seed mixture

Stick could be any practical length. Use natural log with bark on if you desire rustic effect. Keep squirrels away.

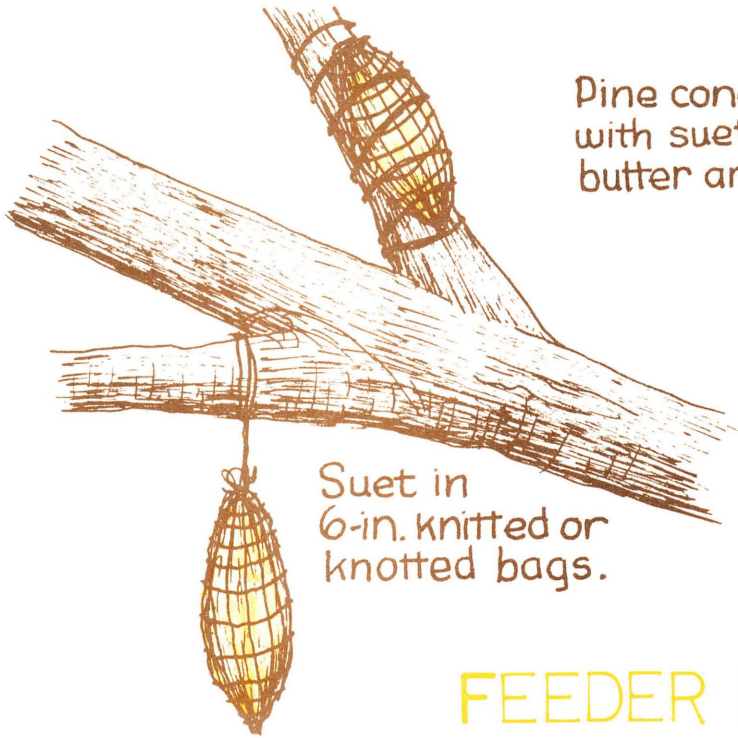


### Feed to Use

In suet holders, insert clean fresh slabs of beef suet. Stuff the holder full so birds can reach the food. Suet will attract jays, woodpeckers of all kinds, chickadees, nuthatches and starlings. Cakes in which seeds are bound together with melted suet or fat are sold commercially; it is also easy to make your own for filling special feeders such as paper cups or drilled logs. Merely heat suet to liquify it, mix in as much small bird food as you can, then pat into molds and let cool. Birds will also take peanut butter from such feeders.

### When Squirrels Become Pests

When squirrels become pests by stealing from feeders (or sometimes even running off with the feeder) you can ward them off in various ways. Safeguard hanging feeders by suspending with wire, well away from nearby perches within leaping distance. Provide feeder posts with a guard made of sheet metal fitted around the shaft. Any local sheet metal worker can make such a device to suit your situation.



Pine cone packed with suet or peanut butter and seeds.

Suet in 6-in. knitted or knotted bags.



## FEEDER IDEAS



Suet Holes in 18 in. log



Window Feeding Station - tray for 3 sizes of seeds, suet branch, & 1/2 coconut shell for miscellaneous foods.

## A TABLE OF FOODS FOR WINTER FEEDING STATIONS

| FOOD OFFERED:   | MOST COMMONLY ATTRACTED ARE:   |  |
|---|--|--|
| Beef suet, hard fat, peanut butter, sweet butter, cottage cheese.   | Chicadee<br>Tufted Titmouse<br>Downy Woodpecker<br>Hairy Woodpecker<br>Other Woodpeckers<br>Red-breasted Nuthatch<br>White-breasted Nuthatch | Brown Creeper<br>Golden-crowned Kinglet<br>Ruby-crowned Kinglet<br>Bluejay<br>Starling<br>Squirrel               |
| Sunflower seeds   | Chicadee<br>White-breasted Nuthatch<br>Cardinal<br>Bluejay<br>Evening Grosbeak<br>Crosbills  | Chipmunk<br>Tufted Titmouse<br>Red-breasted Nuthatch<br>Goldfinch<br>Flying Squirrel                             |
| Crumbs, especially greasy ones of doughnuts, pie-crust, heavy cake, pancakes, bread crumbs, pieces of fruit, apple cores, raisins, and peels  | Almost all species when the weather is severe and when snow and ice winter-lock their natural food supply.                                   |  |
| Small mixed seeds, such as hemp, millet, rape, buck-wheat, canary bird seed, chick-feed, clover, commercial wild bird seed  | Junco<br>White-throated Sparrow<br>Song Sparrow<br>English Sparrow<br>Goldfinch<br>Pine Siskin<br>Cardinal                                   | Snow Bunting<br>Tree Sparrow<br>White-crowned Sparrow<br>Purple Finch<br>Pine Grosbeak<br>Redpoll<br>Horned Lark |
| Larger seeds, such as soybeans, sunflower seeds, wheat, oats, corn (small), millet, rye buckwheat. Some of these seeds should be left in the head, such as wheat, rye, corn, sunflower and millet. Corn ears may be mounted on sharpened sticks that have been driven into the ground or on sharpened nails driven into a rack. | Bobwhite Quail<br>Ruffed Grouse<br>Mourning Dove<br>Pheasant<br>Meadowlark   | Rabbits<br>Chipmunks<br>Flying Squirrels<br>Other Mammals  |

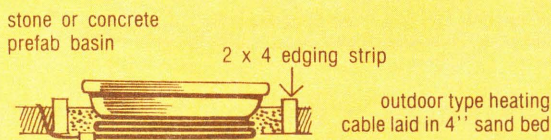
Birds also require grit such as coarse white sand or ground-up clam shells or oyster shells to digest their food. Also, provide some coarse salt for northern finches that have a liking for this, such as siskins,

redpolls, and grosbeaks. **SALT LICKS**—blocks of rock salt may be purchased at feed stores to attract rabbits and other salt-loving mammals. Remember, water is always important at the dinner table.

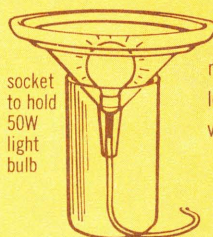
### How to Supply Water

In cold climates an open water supply is vital to birds. Where snow is plentiful the problem is slight, but where there is no snow, you must provide some source of moisture. Two homemade devices shown below will

keep water unfrozen in all but the worst weather. A few manufactured devices are on the market for keeping water in bird baths unfrozen.



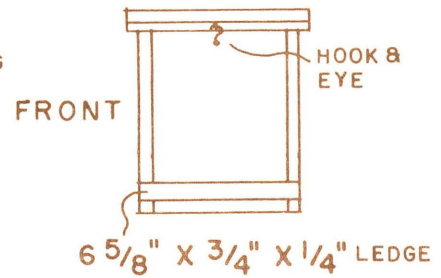
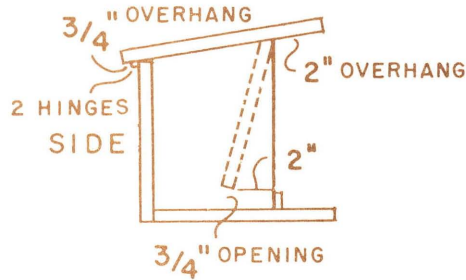
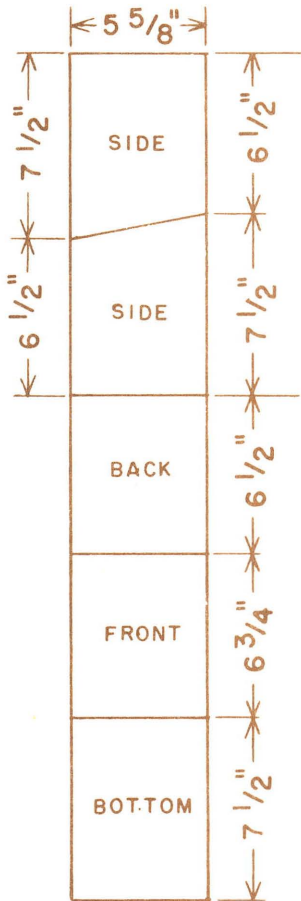
Heating cable (without thermostat) keeps water in basin open except in coldest weather. Squirrels and pets also drink at this ground level water supply.



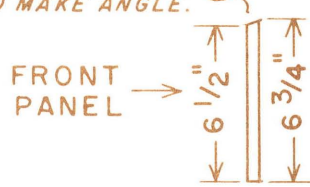
any large flat basin, enamel-ware or ceramic, so feet will not freeze to rim;  
rests on large tinware funnel;  
length of drain tile supports funnel  
weatherproof electrical cord leading to outlet

Heat from lamp warms water in basin; prevents freezeup in all but bitterest cold. Light burns night and day. Insert weatherstrip between funnel and basin to prevent heat loss if necessary.

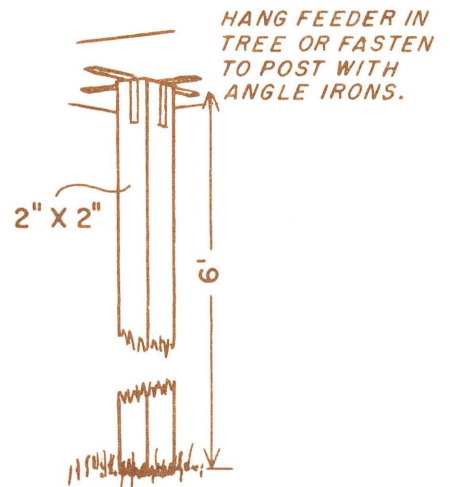
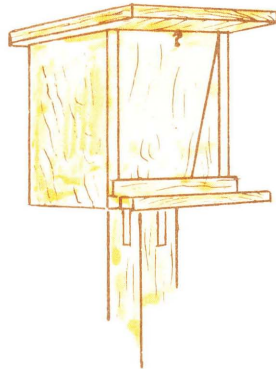
# BIRD FEEDER PLANS



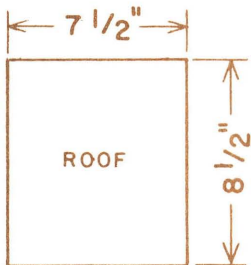
USE SAW OR FILE TO MAKE ANGLE.



SCALE  $\frac{1}{8}$ " = 1"



FILL WITH CRACKED CORN AND/OR SUNFLOWER SEED



## MATERIALS ---

1 EA.  $36$ " X  $5 \frac{5}{8}$ " X  $\frac{1}{2}$ "      $8 \frac{1}{2}$ " X  $7 \frac{1}{2}$ " X  $\frac{1}{2}$ "      $6 \frac{3}{4}$ " X  $\frac{3}{4}$ " X  $\frac{1}{4}$ "

\* REDWOOD OR PINE BOARD, OR EXTERIOR PLYWOOD.

- 18 INCH LONG NAILS
- 4 ANGLE IRONS WITH SCREWS
- 2 SMALL HINGES WITH SCREWS
- 1 HOOK AND EYE

\* NOTE...  $\frac{1}{2}$ " INCH LUMBER IS NOT STANDARD STOCK IN LUMBER YARDS. IT MAY BE NECESSARY TO DRESS  $\frac{3}{4}$ " MATERIAL TO  $\frac{1}{2}$ ".

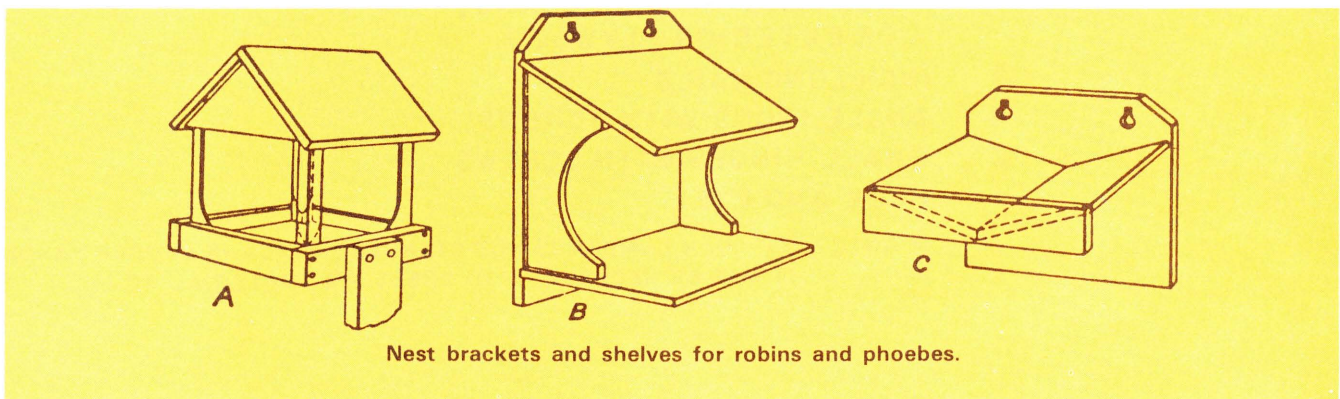


## ARTIFICIAL COVER

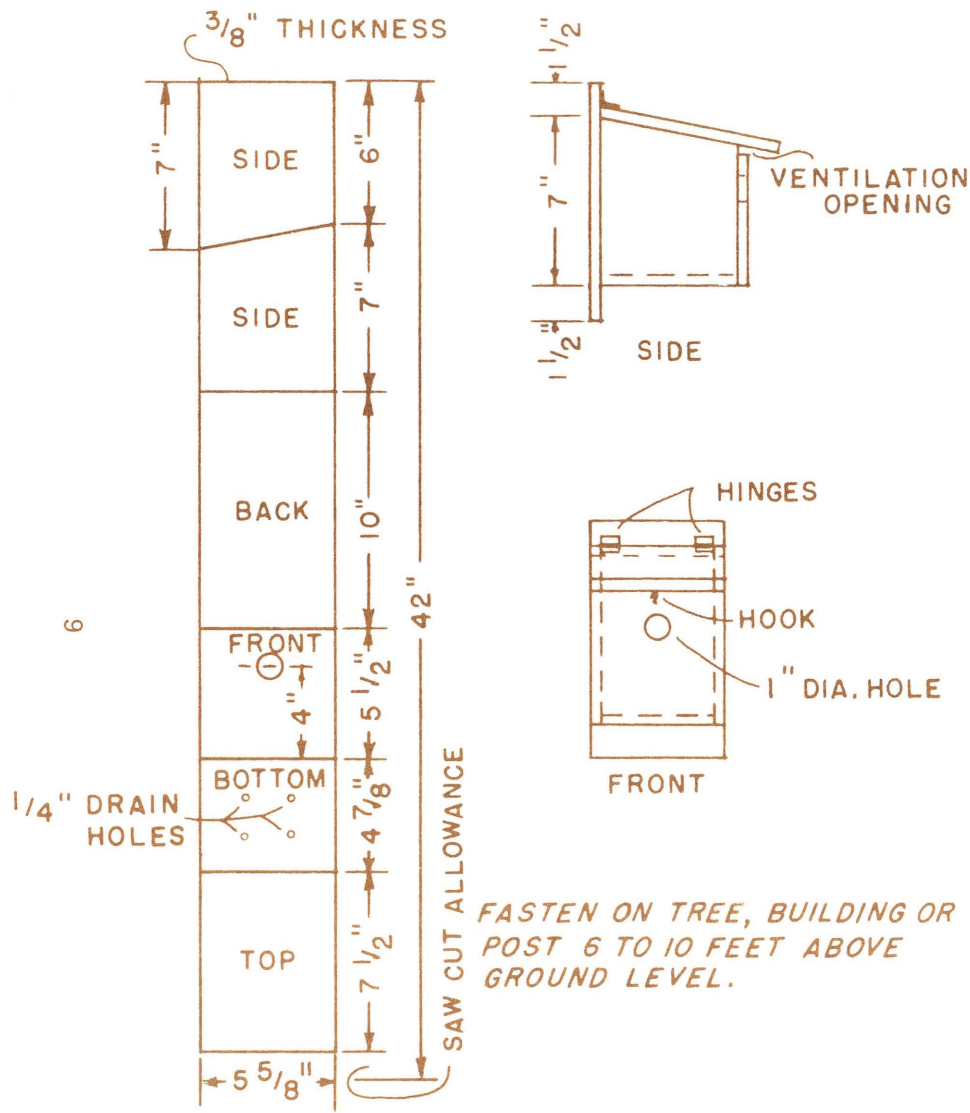
| Bird                  | <i>Birdhouse Dimensions</i> |                 |                      |                      |                     |
|-----------------------|-----------------------------|-----------------|----------------------|----------------------|---------------------|
|                       | Floor of Cavity             | Depth of Cavity | Entrance Above Floor | Diameter of Entrance | Height Above Ground |
|                       | inches                      | inches          | inches               | inches               | feet                |
| Bluebirds             | 5 x 5                       | 8               | 6                    | 1½                   | 5-10                |
| Robin                 | 6 x 8                       | 8               | *                    | *                    | 6-15                |
| Chickadees            | 4 x 4                       | 8-10            | 6-8                  | 1⅛                   | 6-15                |
| Titmice               | 4 x 4                       | 8-10            | 6-8                  | 1¼                   | 6-15                |
| Nuthatches            | 4 x 4                       | 8-10            | 6-8                  | 1¼                   | 12-20               |
| House Wren            | 4 x 4                       | 6-8             | 1-6                  | 1                    | 6-10                |
| Bewick's Wren         | 4 x 4                       | 6-8             | 1-6                  | 1                    | 6-10                |
| Carolina Wren         | 4 x 4                       | 6-8             | 1⅛                   | 6-10                 |                     |
| Tree Swallow          | 5 x 5                       | 6               | 1-5                  | 1½                   | 10-15               |
| Barn Swallow          | 6 x 6                       | 6               | *                    | *                    | 8-12                |
| Purple Martin         | 6 x 6                       | 6               | 1                    | 2½                   | 15-20               |
| Song Sparrow          | 6 x 6                       | 6               | **                   | **                   | 2-3                 |
| Starling              | 6 x 6                       | 16-18           | 14-16                | 2                    | 10-25               |
| Phoebe                | 6 x 6                       | 6               | *                    | *                    | 8-12                |
| Crested Flycatcher    | 6 x 6                       | 8-10            | 6-8                  | 2                    | 8-20                |
| Flicker               | 7 x 7                       | 16-18           | 14-16                | 2½                   | 6-20                |
| Red-headed Woodpecker | 6 x 6                       | 12-15           | 9-12                 | 2                    | 12-20               |
| Downy Woodpecker      | 4 x 4                       | 8-10            | 6-8                  | 1¼                   | 6-20                |
| Hairy Woodpecker      | 6 x 6                       | 12-15           | 9-12                 | 1½                   | 12-20               |
| Screech Owl           | 8 x 8                       | 12-15           | 9-12                 | 3                    | 10-20               |
| Saw-whet Owl          | 6 x 6                       | 10-12           | 8-10                 | 2½                   | 12-20               |
| Barn Owl              | 10 x 18                     | 15-18           | 4                    | 6                    | 12-18               |
| Sparrow Hawk          | 8 x 8                       | 12-15           | 9-12                 | 3                    | 10-20               |
| Wood Duck             | 10 x 10                     | 18-24           | 10-16                | 5                    | 4-20                |

\* One or more sides open

\*\* All sides open

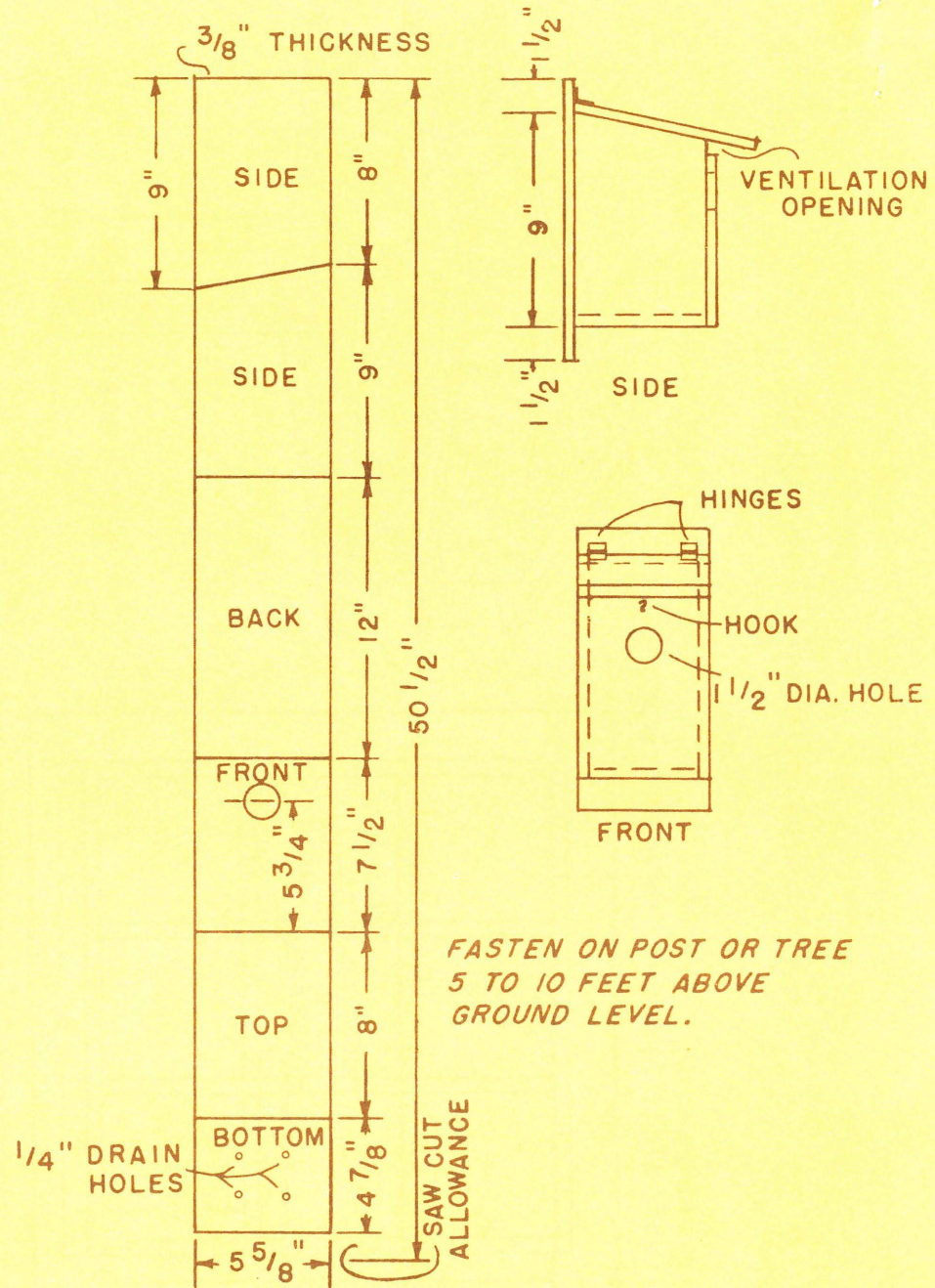


# BIRD HOUSE PLANS FOR HOUSE WREN



SCALE  $1/8$ " = 1"

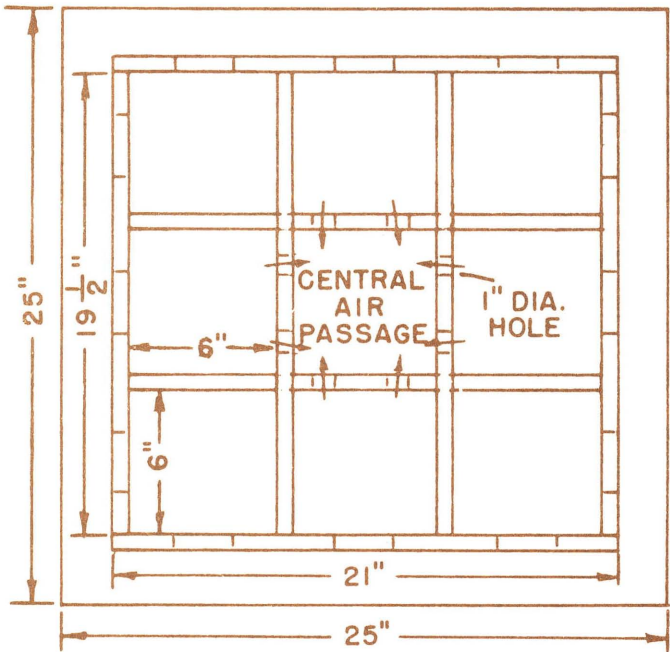
# BIRD HOUSE PLANS FOR BLUEBIRDS



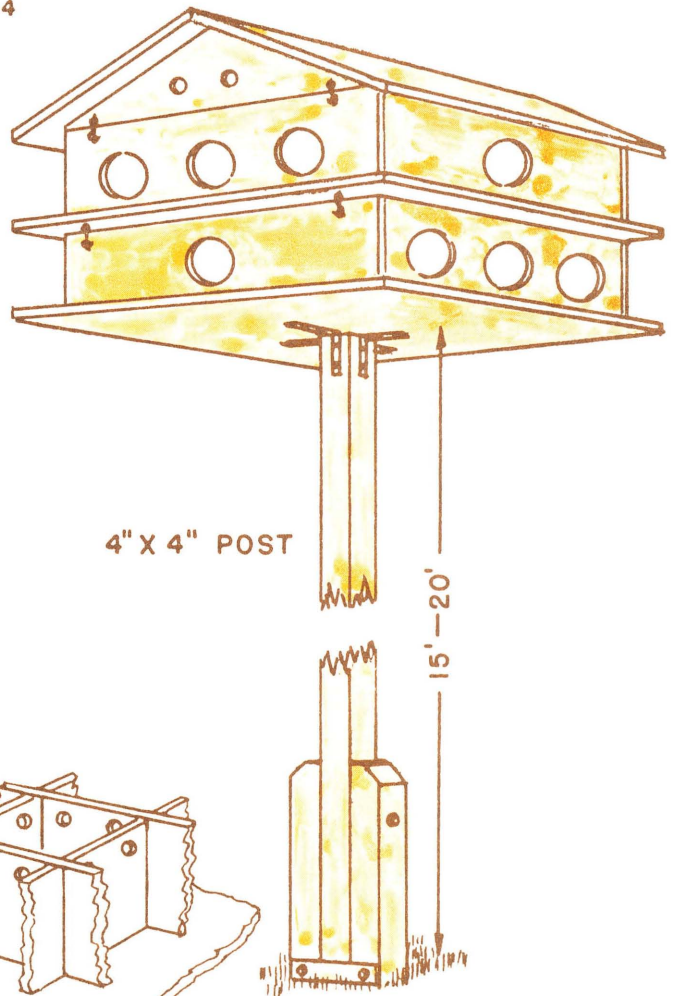
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# PLANS FOR MARTIN HOUSE

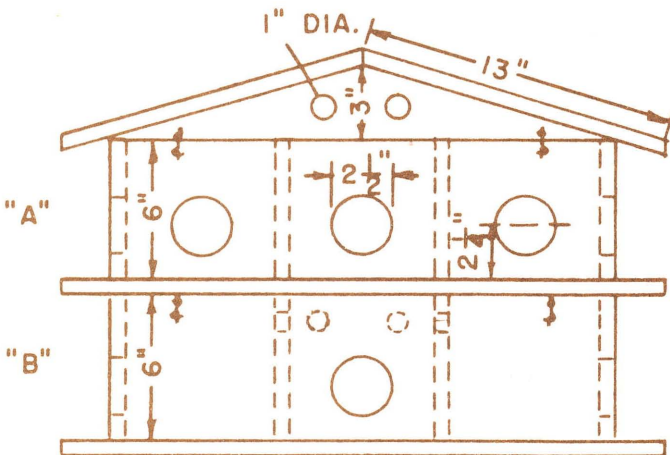
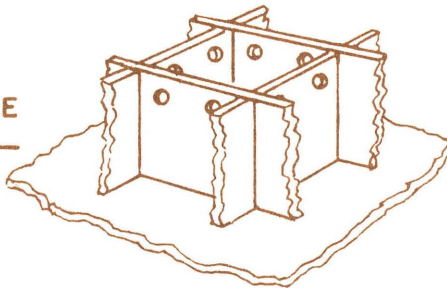
USE WHITE PINE OR OTHER SOFT WOOD.  $\frac{3}{4}$ "



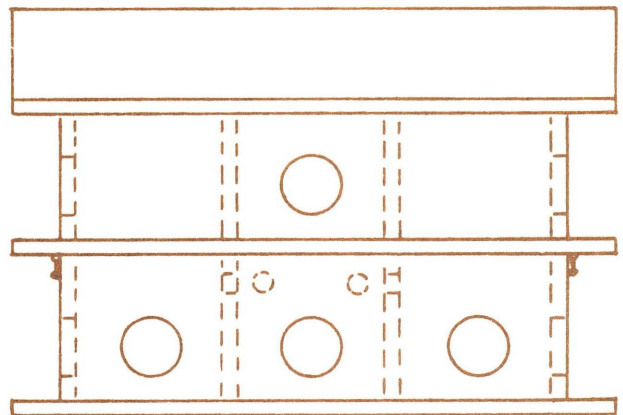
TOP VIEW OF COMPARTMENT



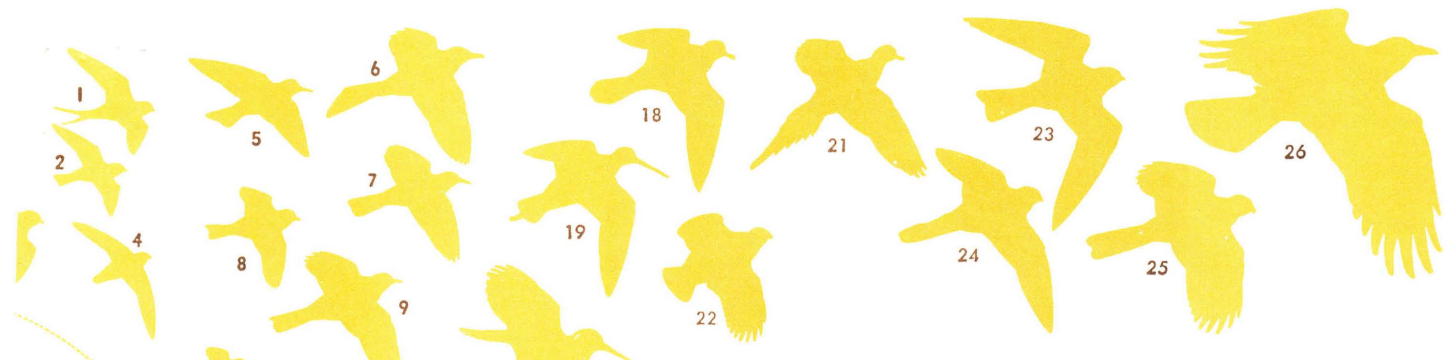
DETAIL OF CENTRAL AIR PASSAGE COMPARTMENT "B"



FRONT VIEW

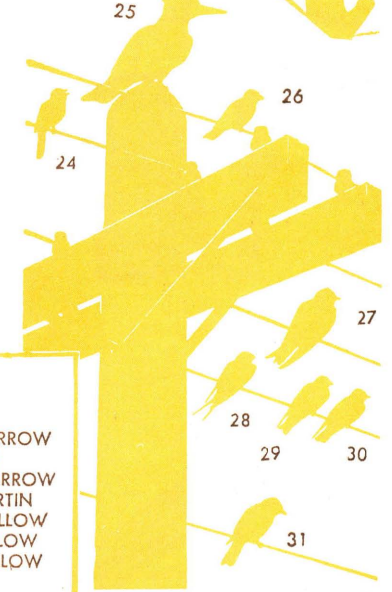
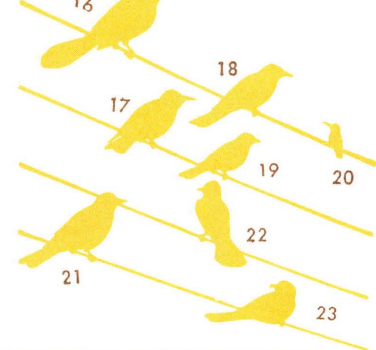
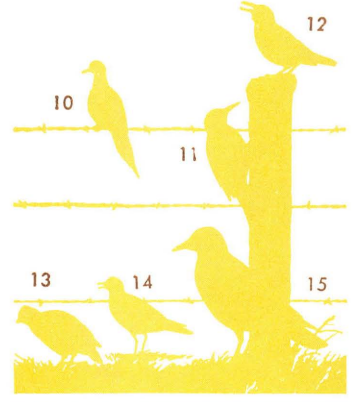


SIDE VIEW



**FLIGHT SILHOUETTES**

|                  |                     |                        |
|------------------|---------------------|------------------------|
| 1. BARN SWALLOW  | 10. GOLDFINCH       | 18. KILLDEER           |
| 2. CLIFF SWALLOW | 11. HOUSE SPARROW   | 19. COMMON SNIPE       |
| 3. PURPLE MARTIN | 12. KINGFISHER      | 20. WOODCOCK           |
| 4. CHIMNEY SWIFT | 13. FLICKER         | 21. MOURNING DOVE      |
| 5. STARLING      | 14. BLUE JAY        | 22. BOBWHITE           |
| 6. GRACKLE       | 15. MEADOWLARK      | 23. NIGHTHAWK          |
| 7. BLACKBIRD     | 16. PRAIRIE CHICKEN | 24. SPARROW HAWK       |
| 8. BLUEBIRD      | 17. PHEASANT        | 25. SHARP-SHINNED HAWK |
| 9. ROBIN         |                     | 26. CROW               |

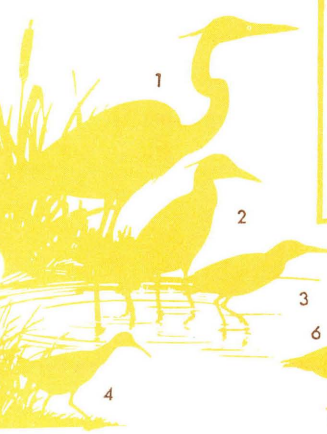


**TYPICAL ROADSIDE SILHOUETTES**

1. SPARROW HAWK
2. RED-TAILED HAWK
3. TURKEY VULTURE

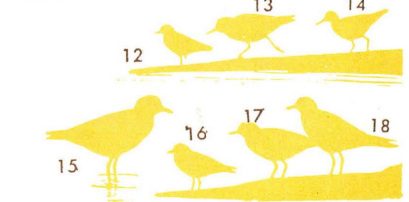
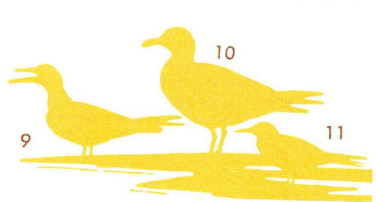
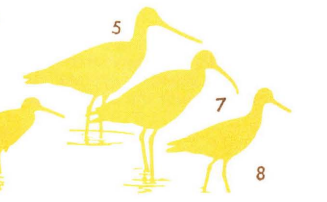
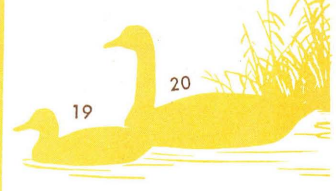
**Identifying  
Backyard Neighbors  
by**

# SILHOUETTES



**SHORE and WATER SILHOUETTES**

|                     |                                  |                  |
|---------------------|----------------------------------|------------------|
| 1. GREAT BLUE HERON | 10. HERRING GULL                 | 18. KILLDEER     |
| 2. NIGHT HERON      | 11. COMMON TERN                  | 19. BLACK DUCK   |
| 3. GREEN HERON      | 12. SEMIPALMATED SANDPIPER       | 20. CANADA GOOSE |
| 4. CLAPPER RAIL     | 13. SANDERLING                   |                  |
| 5. MARBLED GODWIT   | 14. SPOTTED SANDPIPER            |                  |
| 6. DOWITCHER        | 15. BLACK-BELLIED PLOVER         |                  |
| 7. HUDSONIAN CURLEW | 16. RINGED (SEMIPALMATED) PLOVER |                  |
| 8. YELLOW-LEGS      | 17. RUDDY TURNSTONE              |                  |
| 9. BLACK SKIMMER    |                                  |                  |





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