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Feeding and Attracting Wildlife
Michigan State University
Cooperative Extension Service
G.R. Dudderar and R. W. George, Fisheries and Wildlife
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Feeding & Attracting Wildlife

COOPERATIVE EXTENSION SERVICE  MICHIGAN STATE UNIVERSITY
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.
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
- bee-balm
- columbine
- coral bell
- geranium
- nasturtium
- sunflower
- cosmos

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

Low Shrubs (5 ft. to 10 ft.)
- blackberry
- blueberry
- snowberry
- aromatic sumac
- barberry
- viburnum

High Shrubs (10 ft. to 20 ft.)
- bush honeysuckle
- highbush cranberry
- sumac
- spreading juniper
- firethorn
- multiflora rose
- cotoneaster
- autumn olive
- elderberry
- dogwood
- winter berry
- russian olive

Small Trees (20 ft. to 30 ft.)
- crabapple
- mountain ash
- pin, choke, and other small cherries
- hawthorne

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
Lemmon, Robert S. How to Attract the Birds, The County Life Press, Garden City, New York
McKenny, Margaret. Birds in the Garden, New York, Reynal and Hitchcock
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

* 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.
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.

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. 3/4" 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 up and bottom to nail through to tree or post

Bird Lollypop
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 liquefy 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.
Suet in 6-in. knitted or knotted bags.

Pine cone packed with suet or peanut butter and seeds.

FEEDER IDEAS

Suet Holes in 18 in. log

Window Feeding Station - tray for 3 sizes of seeds, suet branch, & ½ coconut shell for miscellaneous foods.
A TABLE OF FOODS FOR WINTER FEEDING STATIONS

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

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.

- stone or concrete prefab basin
- 2 x 4 edging strip
- outdoor type heating cable laid in 4" sand bed
- 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

MATERIALS...

1 EA. 36" X 5 5/8" X 1/2"  
8 1/2" X 7 1/2" X 1/2"  
6 3/4" X 3/4" X 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... 1/2" INCH LUMBER IS NOT STANDARD STOCK IN LUMBER YARDS.  
IT MAY BE NECESSARY TO DRESS 3/4" MATERIAL TO 1/2".
# ARTIFICIAL COVER

## Birdhouse Dimensions

<table>
<thead>
<tr>
<th>Bird</th>
<th>Floor of Cavity</th>
<th>Depth of Cavity</th>
<th>Entrance Above Floor</th>
<th>Diameter of Entrance</th>
<th>Height Above Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>inches</td>
<td>inches</td>
<td>inches</td>
<td>inches</td>
<td>feet</td>
</tr>
<tr>
<td>Bluebirds</td>
<td>5 x 5</td>
<td>8</td>
<td>6</td>
<td>1½</td>
<td>5-10</td>
</tr>
<tr>
<td>Robin</td>
<td>6 x 8</td>
<td>8</td>
<td>*</td>
<td>*</td>
<td>6-15</td>
</tr>
<tr>
<td>Chickadees</td>
<td>4 x 4</td>
<td>8-10</td>
<td>6-8</td>
<td>1½</td>
<td>6-15</td>
</tr>
<tr>
<td>Titmice</td>
<td>4 x 4</td>
<td>8-10</td>
<td>6-8</td>
<td>1¾</td>
<td>6-15</td>
</tr>
<tr>
<td>Nuthatches</td>
<td>4 x 4</td>
<td>8-10</td>
<td>6-8</td>
<td>1½</td>
<td>6-15</td>
</tr>
<tr>
<td>House Wren</td>
<td>4 x 4</td>
<td>6-8</td>
<td>1-6</td>
<td>1</td>
<td>6-10</td>
</tr>
<tr>
<td>Bewick's Wren</td>
<td>4 x 4</td>
<td>6-8</td>
<td>1-6</td>
<td>1</td>
<td>6-10</td>
</tr>
<tr>
<td>Carolina Wren</td>
<td>4 x 4</td>
<td>6-8</td>
<td>1½</td>
<td>6-10</td>
<td></td>
</tr>
<tr>
<td>Tree Swallow</td>
<td>5 x 5</td>
<td>6</td>
<td>1-5</td>
<td>1½</td>
<td>10-15</td>
</tr>
<tr>
<td>Barn Swallow</td>
<td>6 x 6</td>
<td>6</td>
<td>*</td>
<td>*</td>
<td>8-12</td>
</tr>
<tr>
<td>Purple Martin</td>
<td>6 x 6</td>
<td>6</td>
<td>1</td>
<td>2½</td>
<td>15-20</td>
</tr>
<tr>
<td>Song Sparrow</td>
<td>6 x 6</td>
<td>6</td>
<td>**</td>
<td>**</td>
<td>2-3</td>
</tr>
<tr>
<td>Starling</td>
<td>6 x 6</td>
<td>16-18</td>
<td>14-16</td>
<td>2</td>
<td>10-25</td>
</tr>
<tr>
<td>Phoebe</td>
<td>6 x 6</td>
<td>6</td>
<td>*</td>
<td>*</td>
<td>8-12</td>
</tr>
<tr>
<td>Crested Flycatcher</td>
<td>6 x 6</td>
<td>8-10</td>
<td>6-8</td>
<td>2</td>
<td>8-20</td>
</tr>
<tr>
<td>Flicker</td>
<td>7 x 7</td>
<td>16-18</td>
<td>14-16</td>
<td>2½</td>
<td>6-20</td>
</tr>
<tr>
<td>Red-headed Woodpecker</td>
<td>6 x 6</td>
<td>12-15</td>
<td>9-12</td>
<td>2</td>
<td>12-20</td>
</tr>
<tr>
<td>Downy Woodpecker</td>
<td>4 x 4</td>
<td>8-10</td>
<td>6-8</td>
<td>1¾</td>
<td>6-20</td>
</tr>
<tr>
<td>Hairy Woodpecker</td>
<td>6 x 6</td>
<td>12-15</td>
<td>9-12</td>
<td>1½</td>
<td>12-20</td>
</tr>
<tr>
<td>Screech Owl</td>
<td>8 x 8</td>
<td>12-15</td>
<td>9-12</td>
<td>3</td>
<td>10-20</td>
</tr>
<tr>
<td>Saw-whet Owl</td>
<td>6 x 6</td>
<td>10-12</td>
<td>8-10</td>
<td>2½</td>
<td>12-20</td>
</tr>
<tr>
<td>Barn Owl</td>
<td>10 x 18</td>
<td>15-18</td>
<td>4</td>
<td>6</td>
<td>12-18</td>
</tr>
<tr>
<td>Sparrow Hawk</td>
<td>8 x 8</td>
<td>12-15</td>
<td>9-12</td>
<td>3</td>
<td>10-20</td>
</tr>
<tr>
<td>Wood Duck</td>
<td>10 x 10</td>
<td>18-24</td>
<td>10-16</td>
<td>5</td>
<td>4-20</td>
</tr>
</tbody>
</table>

* One or more sides open
** All sides open

![Nest brackets and shelves for robins and phoebes.](image)
BIRD HOUSE PLANS FOR HOUSE WREN

3/8" THICKNESS

SIDE

SIDE

SIDE

SIDE

SIDE

BACK

HINGES

FRONT

TOP

BOTTOM

SAW CUT ALLOWANCE

1/4" DRAIN HOLES

FASTEN ON TREE, BUILDING OR POST 6 TO 10 FEET ABOVE GROUND LEVEL.

SCALE 1/8" = 1"

BIRD HOUSE PLANS FOR BLUEBIRDS

3/8" THICKNESS

SIDE

SIDE

SIDE

SIDE

SIDE

BACK

HINGES

FRONT

HOOK

TOP

BOTTOM

SAW CUT ALLOWANCE

1/4" DRAIN HOLES

FASTEN ON POST OR TREE 5 TO 10 FEET ABOVE GROUND LEVEL.

SCALE 1/8" = 1"
PLANS FOR MARTIN HOUSE

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

TOP VIEW OF COMPARTMENT

DETAI0 OF CENTRAL AIR PASSAGE
COMPARTMENT "B"

FRONT VIEW

"A"

"B"

SIDE VIEW

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

TYPICAL ROADSIDE SILHOUETTES
1. SPARROW HAWK
2. RED-TAILED HAWK
3. TURKEY VULTURE

Identifying Backyard Neighbors by SILHOUETTES

ROADSIDE SILHOUETTES
1. MOCKINGBIRD
2. CUCKOO
3. CARDINAL
4. BLUE JAY
5. CEDAR WAXWING
6. HORNED LARK
7. UPLAND PLOVER
8. PHOEBE
9. PHEASANT
10. MOURNING DOVE
11. FICKER
12. MEADOWLARK
13. BOBWHITE
14. KILLDEER
15. CROW
16. GRACKLE
17. STARLING
18. RED-WING
19. COWBIRD
20. HUMMINGBIRD
21. ROBIN
22. KINGBIRD
23. SHRIKE
24. SONG SPARROW
25. KINGFISHER
26. HOUSE SPARROW
27. PURPLE MARTIN
28. BARN SWALLOW
29. TREE SWALLOW
30. CLIFF SWALLOW
31. BLUEBIRD

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