

G3176

Bird Feeding— Tips for beginners & veterans





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Enjoying birds close to home

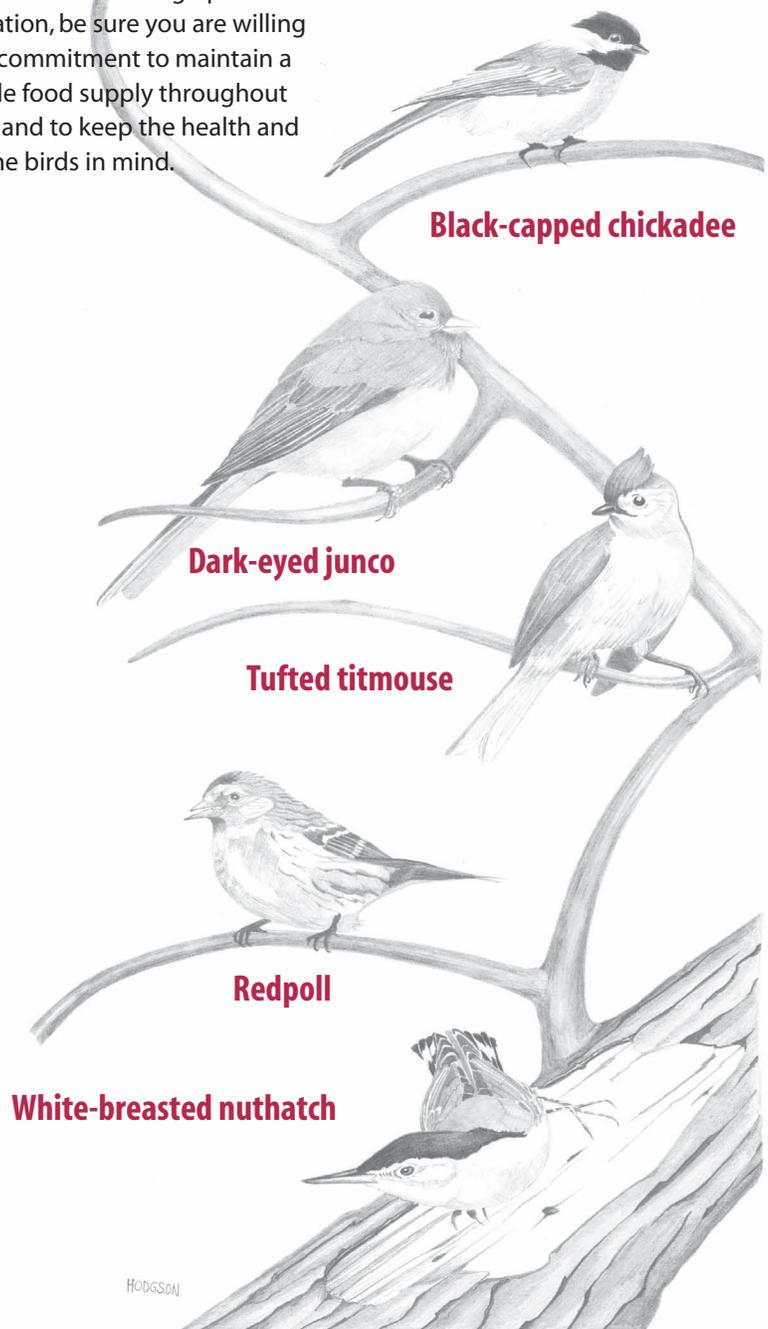
Bird feeding is one of the most popular ways to enjoy wildlife. In 2006, researchers estimated that 55 million adult Americans fed wild birds and other wildlife. We suspect the activity is at least as popular today. Americans spent an estimated 3.3 billion dollars on wild bird food in 2006. The annual figure has continued on a steady upward trend.

Bird feeding is the only interaction many people have with wildlife. Compared to many other forms of recreation, it can be an inexpensive activity. Birds are diverse, colorful and entertaining; they add life to a sometimes monotonous winter landscape. Watching birds at a feeder is excellent therapy for people confined indoors by illness, accident or winter weather. Feeders bring birds in close where they can be observed, identified, photographed or simply enjoyed.

Most amateur and professional ornithologists feel that feeding is mutually beneficial to birds and people, but it may not always be entirely in the birds' best interests. Feeding reduces natural competition among birds and can subject them to diseases and predation. Certain species—the cardinal is a good example—have extended their ranges farther and farther north, probably in response to the availability of feeders. Depending on one's outlook, such range extension can be viewed as good or bad.

There are certainly right and wrong ways to attract and feed birds. Feeding can be harmful if it is not continued through the winter. The severity of the weather and availability of natural foods and other feeding stations in the neighborhood determine the actual potential for harm. Feeders contaminated with bird droppings and moldy seed can facilitate disease transmission. Before setting up a feeding station, be sure you are willing to make a commitment to maintain a dependable food supply throughout the winter and to keep the health and safety of the birds in mind.

This publication is a basic guide for the beginner embarking on the hobby of feeding birds, but it should also help veterans improve their feeding stations. It contains tips that will help you maximize your feathered guests' benefit and safety, deal with pests and select equipment and food. If you heed the cautions, both you and the birds should enjoy the experience.



Black-capped chickadee

Dark-eyed junco

Tufted titmouse

Redpoll

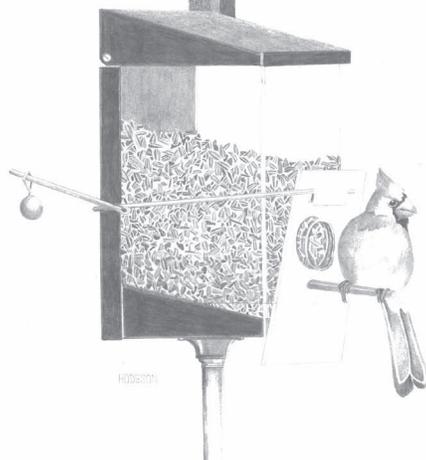
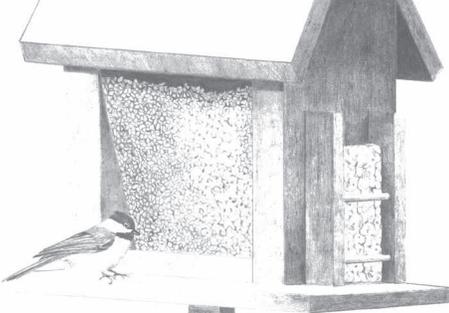
White-breasted nuthatch

Feeders

Shelf feeder



Wooden feeder



Feeder with counter-balanced treadle

There are nearly as many sizes and styles of feeders as there are species of birds to attract to them. A feeding station may be one simple feeder or a dozen or more different ones scattered around a yard. The type and number of feeders you set out will affect the diversity and abundance of birds you will attract to your yard. Let your interest and financial resources determine your level of involvement.

The **shelf** or **platform** feeder consists of a simple platform that should be elevated from the ground by mounting it on a post or window sill. It suits many different species and types of food, can be built easily and inexpensively at home, and is easy to fill. On the negative side, it is exposed to snow and rain (unless you put a roof on it), provides easy access for squirrels and facilitates accumulation of bird droppings. Be sure there are drainage holes in the bottom of a tray feeder. In addition, birds can scratch large quantities of seeds onto the ground. This may mean a loss of seed but it will also help some ground feeding birds and small mammals.

The **traditional wooden feeder** is really a shelf with a roof and several modifications for dispensing a variety of food items. Typically, it has a glass or plastic hopper that holds and dispenses seeds to the feeding area by gravity. Some models have rack-like structures on the ends to hold suet cakes and/or wooden pegs on which to impale bakery products or scraps to prevent them from being carried away whole. This type of feeder is usually mounted on a post or railing and is suitable for most birds. If you are considering only one feeder, this is probably the best style to select.

More sophisticated versions of this type of feeder may be made of metal or plastic and may include modifications to keep squirrels off, increase seed holding and dispensing capacity, or feed only certain species. We will discuss anti-squirrel tactics later. Feeders can be made selective for certain species through the use of a counter-balanced treadle device as a feeding perch. The device can be set to close off access to the seed when a heavy bird such as a pigeon, crow or grackle lands to feed, while allowing smaller, more “desirable” species to feed without interference.

Whether you want to select for certain species is, of course, a matter of personal preference. A bird one person considers a pest may be another’s favorite. There are other methods to favor certain species; specialized feeders and special food items may be just as effective.

Woodpeckers and nuthatches can be attracted to suet feeders or log feeders. A **suet feeder** can be as simple as a mesh bag—such as an onion bag—filled with suet and hung from a limb. Or it can be a basket constructed from scrap wood and 1/4-inch mesh hardware cloth. Melted, suet can be mixed with a dry food and packed into virtually any kind of mold or container. Feeders designed to hold commercial suet cakes are also available.

The **log feeder**, a common rustic design, consists of a 1- or 2-foot section of a log or limb, usually 2–3 inches in diameter. Suet or peanut butter mix can be packed into holes bored into the log. Usually a small peg is added just below each hole to serve as a perch.

A **thistle (niger) sock** is a fine-mesh tubular bag designed to dispense thistle seed. Small birds, especially goldfinches, cling to the sock and remove the small seeds. It is an inexpensive feeder that quickly pays for itself by conserving the expensive thistle seeds.

Tube feeders are very popular and easy to use. They consist of a tube of clear plastic or glass with feeding perches and access holes spaced evenly through the tube. It is a modern version of the log feeder that dispenses seeds rather than suet. It is efficient and durable and comes in a variety of sizes.

Hummingbird feeders are popular in the summertime when hummingbirds are present. The most common version is a plastic bottle fitted with one or more tubular funnels to hold and dispense sugar water. On many models, the dispensing tubes are decorated with colorful (usually red) plastic flowers, which presumably help hummingbirds find the feeder. "Instant nectar" powders are available for feeding hummingbirds, but a simple mix of one part sugar to four parts water, boiled, then cooled, is easy to make and inexpensive. Do not use honey as it tends to get moldy. Also, red coloring in the sugar water is not necessary. When the sugar water gets cloudy or goes unused for a week or so, replace it with fresh solution.

Ant traps can be used with hummingbird feeders to keep ants out of the sugar water solution. Sticky compounds are not recommended to keep bees and ants out because of the risk of fouling the birds' feathers.

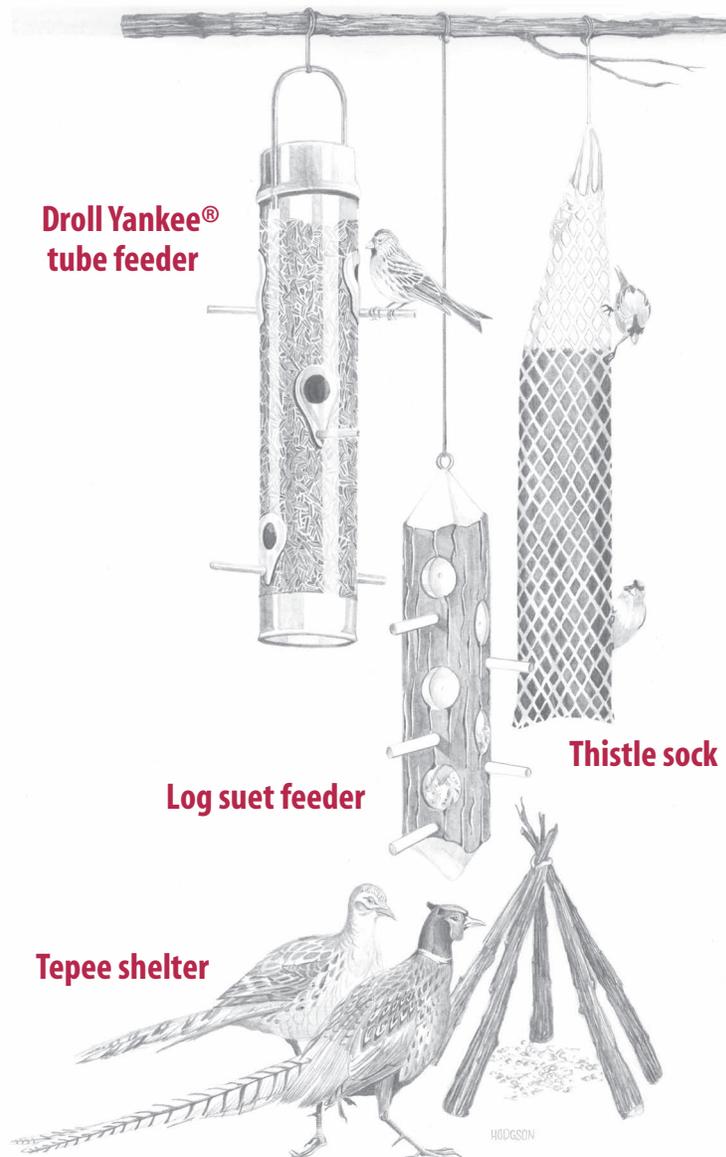
Orioles respond to a simple feeder with a small dish or container to hold grape jelly—a favorite food. A peg or nail on which half an orange is

impaled is also very attractive. Such features can be added to existing feeders or commercial oriole feeders are available.

All of these basic feeder designs can be modified to meet your needs. "Designer" feeders shaped like football helmets, train cars, or miniature Victorian mansions are more popular with feeder purchasers than with the birds. In fact, very effective, inexpensive feeders can be created from recycled materials like 2-liter soda bottles and milk jugs.

Miscellaneous feeding stations

If you live in a rural area, you can construct large feeders to attract pheasants, quail, turkeys and other species. A tepee or lean-to made of tree limbs or lumber provides shelter and a place to spread grain. Because of legal bans on feeding deer where disease control is an issue, you must be sure your bird feeders are not also serving as "deer feeders."



Feeder placement

You should consider several things when deciding where to place feeders. First, you will want them to be visible from a favorite kitchen or living room window—after all, seeing and enjoying birds is one of the main reasons for feeding them. Second, feeders should be sheltered from prevailing winds and snow drifts that make filling difficult or unpleasant. Third, feeders mounted on poles or suspended from limbs or wires should be 5 to 6 feet from the ground. Fourth, increasing the number of feeders available will reduce competition among birds visiting your feeders. Last, and perhaps most important from the birds' standpoint, feeders should be near cover—shrubs, trees or both—to provide a place of retreat from cats or other threats, a gradual approach route for "shy" birds, or a convenient perch for opening a sunflower seed. We recommend having some cover within 5 feet. In the absence of natural cover, a tree branch with lots of twigs can be attached to the feeder support post or rail.

Millions of birds are killed by window collisions annually. Recent research has found that placing feeders closer to windows results in fewer window strikes and dead birds. When feeders are placed close to windows, startled birds are less likely to impact the glass with enough force to cause injury. Researchers recommend placing feeders within three feet of windows.



Food

The food you provide is more important than feeder design in determining the success of your feeding station, both in terms of numbers and species of birds you attract. Seeds may be purchased by individual variety or in mixed form. What and how you buy will depend on a number of factors such as bird-feeding goals, cost and availability. The table to the right shows the food preferences of common birds as determined by the United States Fish and Wildlife Service and the Cornell Laboratory of Ornithology.

Many of the seeds commonly found in inexpensive commercial mixes—such as wheat, millet, peanut hearts, hulled oats and rice—are relatively unattractive to most birds. These commercial mixes may be cheaper, but you will attract as many or more birds with “preferred” seeds. This does not mean that unattractive seeds will not be eaten, but preferred seeds will be eaten first and tend to attract birds that might not otherwise visit a feeder. Thistle (niger) seeds, hulled sunflower seeds, safflower seeds and fine-cracked corn are very useful for attracting particular species.

Food preferences of common bird species

Blue jay	whole peanut kernels, large striped sunflower seeds
Brown-headed cowbird	white proso millet, other millets, canary seeds
Cardinal	oil-type sunflower seeds, large striped sunflower seeds, safflower seeds
Chickadee	oil-type sunflower seeds, large striped sunflower seeds, safflower seeds
Dark-eyed junco	red and white proso millet, canary seeds, fine cracked corn
Evening grosbeak	oil-type sunflower seeds, large striped sunflower seeds
Goldfinch	niger seeds, hulled sunflower seeds, oil-type sunflower seeds
Grackle	hulled sunflower seeds, cracked corn
House finch	oil-type sunflower seeds, large sunflower seeds, millets, niger seed
House sparrow	white proso millet, most small seeds
Mourning dove	oil-type sunflower seeds, white and red proso millet
Purple finch	oil-type sunflower seeds, large sunflower seeds, millets
Song sparrow	white proso millet, red proso millet
Starling	peanut hearts and hulled oats, table scraps
Tree sparrow	red proso millet, white proso millet, fine cracked corn
Tufted titmouse	peanut kernels, all types of sunflower
White-crowned sparrow	oil-type sunflower, white proso millet
White-throated sparrow	same as white-crowned



Canary seed



Red proso millet



Niger thistle seed



Black oil sunflower seed



Cracked corn



Striped sunflower seed



White proso millet



Hulled sunflower pieces

Overall, small black oil-type sunflower seeds and white proso millet give the most for your bird-feeding dollar. The larger, gray- or black-striped sunflower seeds are also excellent food, but given a choice, most birds take the small black ones. All sunflower seeds have high caloric value. About 70 percent of the weight of an oil-type seed is kernel, compared to 57 percent for the traditional types. Black sunflower seeds are readily available and black sunflower alone or simple mixes such as equal parts of black sunflower, white millet and cracked corn now dominate the seed supply market.

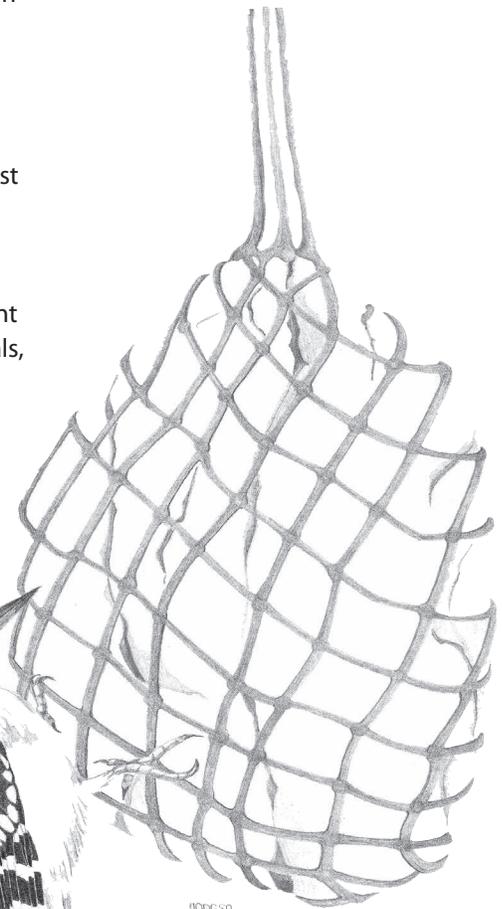


Seed supplies can be supplemented with stale bakery products, table scraps and fruit, but these foods have some disadvantages. Fruit is attractive to robins, starlings,

mockingbirds, catbirds and orioles, so it is better as spring and summer food. Diced apples and raisins are good for helping robins through late spring storms. Grape jelly and orange halves attract orioles. Table scraps and bread often attract less desirable species, such as house sparrows, starlings, grackles and pigeons, not to mention raccoons and other unwanted mammals.

Suet is very attractive to a number of species, especially woodpeckers and chickadees. Most people use beef suet, but hunters will find that suet from a deer is also quite attractive to birds. Beef suet used to be free for the asking at the local butcher shop or grocery store. But you will probably have to pay for it now; its popularity as a bird food has created a market for it. Suet can be fed "as is" or melted and mixed with dry foods to attract a variety of species. We recommend combining suet with oatmeal, hulled sunflower kernels, peanuts or cracked corn to obtain a mix that is entirely edible. Whole seeds can be provided more efficiently in other feeders. Bacon fat can be used, but tends to be soft and messy. Peanut butter can be used in the same way and is very attractive but also relatively expensive. Mix peanut butter with dry foods, suet or both because birds can find straight peanut butter difficult to swallow.

Most attempts to grow bird food in a backyard garden meet with disappointment. Birds usually harvest sunflower seeds themselves long before you get the chance, and the yield of other seeds does not justify the effort required. But you may want to plant bird-food-producing annuals, shrubs and trees as part of your landscaping, especially plants that provide food through the winter when natural food sources can be scarce. Consult the University of Wisconsin-Extension publication *Landscape Plants that Attract Birds* (G1609) or the Minnesota Department of Natural Resources popular book *Wild About Birds*.



Hairy woodpecker on suet bag

Some tips on buying birdseed

Buy in bulk. Buying in 50-pound bags will not only save money, but you can get the seeds you want and make your own mixes. Do not underestimate the quantity of seed you may use. While 50 pounds of seeds may last all season at an urban feeder, an active, rural feeding station may use 500 pounds or more in a single winter.

Be prepared—at least mentally—for the costs at the start of the season so that you will not have to close down your feeder in mid-January for financial reasons. Thistle (niger) seed at about \$1 to \$2 per pound can add up very quickly if you are fortunate enough to have a flock of hungry goldfinches or house finches in the neighborhood. It is better to put out less-expensive (and less-preferred) commercial mixes for the entire feeding season than to stop feeding in mid-season.

Before buying seeds for the winter, check with local Audubon Society chapters, nature centers or sportsmen's clubs. Many of these organizations sell seed as a fund-raising activity. The seed is usually good quality and reasonably priced, and your money will help the birds through the organization's conservation activities.

Store your seed in a dry place.

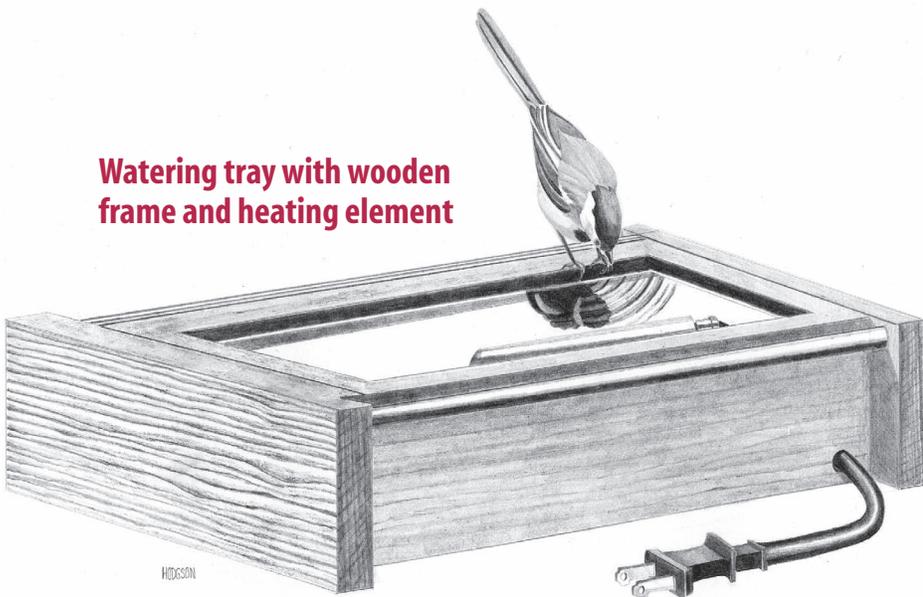
Plastic or metal trash cans with tight-fitting lids make excellent storage containers. For smaller quantities, you may be able to get 5-gallon plastic buckets at cheese factories, ice cream parlors or other food-handling establishments. Metal storage bins may be preferable if you store seeds where rodents could be a problem.

Water and grit

These materials can make a feeding station more attractive. By providing water, which birds use for both drinking and bathing, you may save your birds a long flight to a natural source in very cold weather. Several commercial watering trays are available, but you can use almost any shallow container (the container must be shallow if the birds are to bathe in it). A wooden frame makes perching for a drink easier. Small heating elements, available from bird-feeding equipment suppliers, farmers' co-ops and some hardware stores, will keep the water from freezing. If birds do not seem to notice the water you provide, create a slight drip with a hose or faucet to disturb the surface; this should attract them. Unlike feeders, locate water baths in open areas with good visibility. This gives water-soaked birds a little extra time to evade predators.

Seed-eating birds need grit to digest their food. They use it like teeth to grind the food, although they may obtain minerals from some of it. Roadsides and sanded sidewalks are common winter sources of grit, but many birds will accept it readily if it is offered in addition to foods. Do not mix grit with seeds. Coarse sand or oyster shell grit are both suitable; others are available from poultry suppliers or game bird breeders. Oyster-shell grit also provides calcium important for eggshell production in the spring. Small species such as goldfinches, siskins and redpolls use canary grit.

Watering tray with wooden frame and heating element



HIDGSON

Coping with squirrels

People's attitudes toward squirrels vary tremendously. If you enjoy squirrels, feeding them is easy and they need little encouragement. However, most bird-feeding enthusiasts view them as pests. The most serious offenders are common gray squirrels and sometimes their smaller cousins, red squirrels. Nocturnal visits by a family of flying squirrels are usually viewed much more favorably.

The case against gray squirrels centers on their seemingly insatiable appetites, their interference with birds' feeding, and the damage their gnawing does to wooden or plastic feeders. Squirrels are persistent and acrobatic in their efforts to obtain food intended for feathered guests. There are several approaches to problem squirrels.

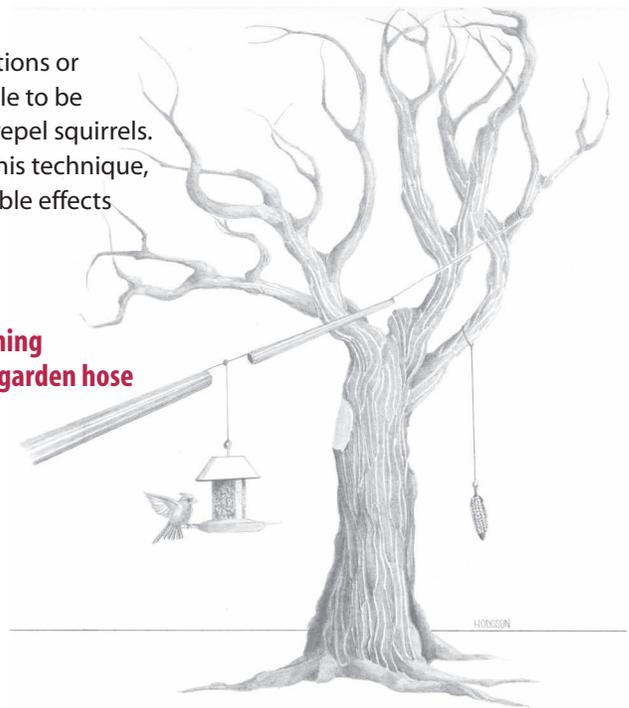
Remove them. Squirrels can be captured in commercial or homemade live traps, but this raises the question of what to do with captured squirrels. If they are to be released, move them to a wooded rural area or park at least five or six miles from the capture site. You must have permission from the landowner or public property manager before releasing any captured animals.

Prevent their access to feeders. This may not be as easy as it sounds. The acrobatic abilities of a squirrel trying to get into a suspended feeder almost defy imagination. Some techniques that help keep squirrels away from feeders include placing sheet metal sheathing or cones on feeder poles, hanging feeders from support cables or from horizontal lines threaded through a 6-foot length of garden hose or tubing, or using "squirrel-proof" feeders. Remember, in your anti-squirrel scheming, that in winter squirrels may be able to jump from snow banks.

Hot pepper formulations or additives are available to be mixed with seed to repel squirrels. However, if you try this technique, be alert for undesirable effects on birds.

Learn to live with them. If all else fails, provide a feeder for the squirrels away from the bird feeders. Stock it with corn or nuts and hope that this distraction will keep them away from the birdseed. An ear of dried corn attached to a cable and hung from a limb will also keep the squirrels busy. One frustrated person we know drilled holes through several nuts and nailed them to a tree to keep the squirrels busy!

Line running through garden hose



Sheet metal cone

Sanitation

It is very important for the health of your feathered guests to keep your feeders clean. If you find dead birds around a feeder, poor sanitation is probably a contributing factor. High concentrations of birds at feeders facilitate the spread of disease, and feeders themselves may become contaminated. An intestinal infection called salmonellosis is spread through fecal droppings. As droppings accumulate, the problem gets worse. Finches and sparrows are especially susceptible to this disease.

It is a good idea to clean out your feeder every week or two. Remove moldy seed and fecal droppings. Painted, varnished, plastic and metal feeders are easy to clean. To disinfect feeders, dunk them in a weak bleach solution (one part bleach to nine parts water) and let them dry before refilling with fresh seed. Remove accumulations of spilled seeds and seed coats from the ground because this material can be the source of fungal diseases.

Disease problems are especially likely to occur if you continue to feed into the summer. Warm weather promotes the survival and growth of many disease organisms. Especially if mourning doves are frequent visitors to your feeders, clean the feeders and do not begin feeding again until fall. Mourning doves are susceptible to a parasitic disease called trichomoniasis that is easily spread at feeders when contaminated food drops from the mouth of an infected bird. House finches are especially susceptible to a disease called conjunctivitis. The appearance of finches with crusty, closed eyes is a sign to clean feeders and stop feeding.

There's really no reason to feed during the summer. Natural foods are abundant then, and the birds can forage for themselves. However, if you wish to continue to attract birds, practice good sanitation. Nesting material such as string can make a feeder doubly attractive in spring or early summer. Late April, when buds begin to open, is a safe time to discontinue feeding for the summer in Wisconsin. Hummingbirds are in a special category, of course. They are present only in summer, and hummingbird feeders are intended for summertime use, as are oriole feeders. As noted earlier, keep sugar water, jelly, fruit and summertime feeding foods fresh and clean.

Hummingbird feeders should be taken down, disassembled and scrubbed with a bottle brush every week or two during the summer.

Pest birds

The best way to deal with pigeons, house sparrows, starlings and crows is to avoid feeding the foods they prefer. You can also trap pigeons and sparrows in commercial traps and remove them. Sparrows avoid unstable feeders, so any suspended feeder will discourage them. Crows are frightened by the slightest human activity. Cold weather and snow really bring in the starlings, so during these wintry periods, remove scraps, bread and larger food items from your feeder. You can discourage all these less-desirable species by feeding mainly sunflower seeds. Remember to check state and municipal laws before you consider trapping or using a pellet or BB gun to control pest birds. Firearms laws and safety take precedence over pest control needs. In Wisconsin, only the pigeon, starling and house sparrows are not protected. All other species are protected by state or federal laws or both.



Some general tips

- A discarded Christmas tree provides shelter and cover near a feeder if natural cover is in short supply.
- A clasp from a dog leash makes a handy attachment for a hanging feeder—it makes the feeder easy to remove for filling or repair.
- A good field guide or several hours with a “pro” makes bird identification simple and fun.
- You can mark the passing of the seasons by keeping track of the comings and goings of different species. See websites and opportunities for “citizen science” contributions to bird management.
- A tray or pan mounted beneath the feeder reduces waste by catching a lot of spilled seeds. But always provide some seeds on the ground for doves, pheasants, juncos, towhees, sparrows, blackbirds and other ground-feeding species.
- A poor winter at your feeder (low numbers, few species) is usually a sign of a mild winter or abundant natural food rather than some sort of catastrophe.
- Cardinals, blue jays and house sparrows are often the first visitors to a new feeder. When titmice, woodpeckers and nuthatches begin coming in, you know you have established an effective feeding station.
- Do not be discouraged if it takes time for birds to respond to a new feeder. It makes a big difference whether you live in a new subdivision, barren of trees, or in a heavily wooded acre on the edge of town and whether your neighbors have feeders.
- Suet-seed mixes can be purchased in cakes, blocks, chunks and other forms. They are more expensive than homemade, but more convenient.
- If you attract a rare bird to your feeder, report it to a local Audubon office or state wildlife agency.
- If you happen to see a banded bird, try to read the band number and report it to a known bander, a Wisconsin Department of Natural Resources employee or the USGS Bird Banding Laboratory (call 800-327-BAND or see website). Banders work hard for the recovery information they get. Banded birds are likely to return to a particular feeder year after year, so you can renew old friendships.
- If you wish to try your hand at homemade feeders or birdhouses, consult the University of Wisconsin—Extension publication *Shelves, Houses and Feeders for Birds and Mammals* (NCR 338).
- If your feeder is visited by a Cooper’s hawk or other avian predator, don’t panic. It’s a great chance to see another kind of bird in action. The smaller birds can take care of themselves. If you wish, close your feeders and let the birds scatter until the hawk moves on to better hunting grounds.
- Cats are a special case, whether they are feral or belong to you or your neighbors. There is a large body of literature on the impact of free-ranging cats on songbirds and other wildlife. Keep cats indoors! See the American Bird Conservancy website for information and advice.
- If window collisions are a recurring problem, check the Cornell Laboratory of Ornithology website for an excellent review of options to protect the birds.

We urge you to try bird feeding. If you do, think of it more as a recreational activity or hobby than as a way to manipulate bird populations. If you are mindful of the potential problems discussed in this publication, both you and the birds will benefit.



For more information

Websites

Bird Banding

U.S. Department of the Interior, U.S. Geological Survey, Patuxent Wildlife Research Center—Bird Banding Laboratory.
All about bird banding and how to report a band.
www.pwrc.usgs.gov/bbl/

Bird Feeding

More on feeders, feeder placement, food, feeder maintenance, feeder pests and predators, avoiding window collisions.

Cornell Lab of Ornithology's page on Feeding Wild Birds:

<http://www.birds.cornell.edu/AllAboutBirds/attracting>

National Audubon society's page on Bird Feeding Basics

www.audubon.org/bird/at_homebird_feeding/index.html

Cats

American Bird Conservancy's page on Cats Indoors!: The campaign for safer birds and cats

www.abcbirds.org/cats

Citizen-based monitoring

You can help collect important data on the birds you attract.

Project FeederWatch is operated by the Cornell Lab of Ornithology in partnership with the National Audubon Society, Bird Studies Canada and Canadian Nature Federation. Project FeederWatch is a winter-long survey of birds that visit feeders at backyards, nature centers, community areas and other locales in North America.

FeederWatchers periodically count the highest numbers of each species they see at their feeders from November through early April. FeederWatch helps scientists track broadscale movement of winter bird populations and long-term trends in bird distribution and abundance.
www.birds.cornell.edu/pfw/

Wisconsin NatureMapping—

Interactive website for reporting wildlife observations. Wisconsin NatureMapping is an outreach program that allows school children, citizens, community groups and other city, county and state organizations to collect wildlife-related information available to everyone. The program provides an opportunity for students and volunteers to perform field studies that contribute to the state's biological databases.
www.wisnatmap.org/

Also worth visiting

North American Breeding Bird Survey (BBS)

www.pwrc.usgs.gov/bbs/

National Audubon Society's Christmas Bird Count

www.audubon.org/bird/cbc/index.html

The Great Backyard Bird Count

(National Audubon Society and Cornell Lab of Ornithology)
www.birdsource.org/gbbc/

Publications

Shelves, Houses and Feeders for Birds and Mammals (NCR338)

By G. Barquest, Scott R. Craven and Robert Ellarson. University of Wisconsin-Extension, Cooperative Extension. Offers information and construction plans on building houses and feeders for a variety of bird species, as well as squirrels and bats. 47 pages.
<http://learningstore.uwex.edu>

Landscape Plants that Attract Birds (G1609)

By Scott R. Craven and Robert Ellarson. University of Wisconsin-Extension, Cooperative Extension. Provides information on plant species that attract birds, including their habitat requirements, landscaping ideas and sources of material. 9 pages.
<http://learningstore.uwex.edu>

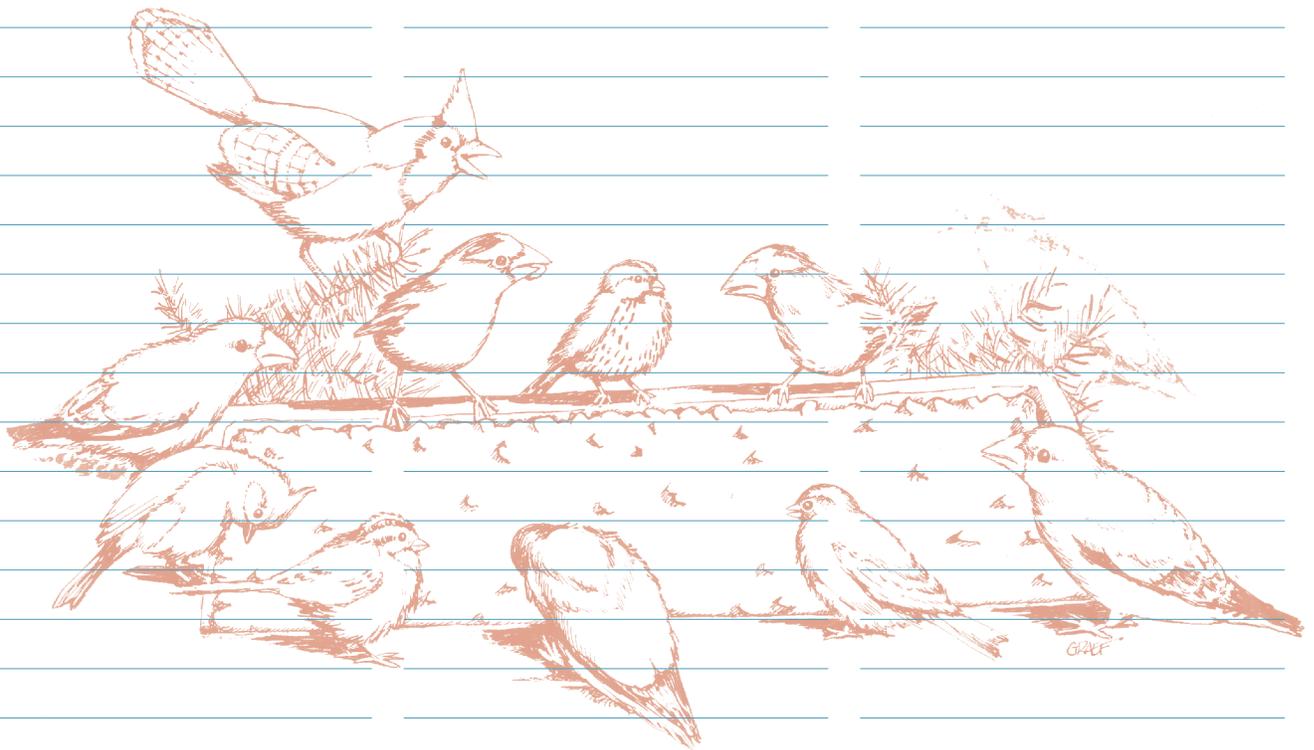
Wild About Birds: The DNR Bird Feeding Guide

By Carroll Henderson. Minnesota Department of Natural Resources Publications. Excellent guide designed to increase the number of species using your feeder. Includes workshop basics for construction of 26 different feeders and tips on 44 types of food, plus detailed descriptions and photos of almost all the feeder-using species east of the Rocky Mountains. More than 425 color photos.

To order, write, call, fax or e-mail:

Minnesota's Bookstore
660 Olive Street
St. Paul, MN 55155
1-800-657-3757
Fax: 651-215-5733
E-mail: mnbookstore@state.mn.us
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Bird feeding notes







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