



Wildlife in My Backyard

Part 1: Attracting Winter Birds and Bird Feeding

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©Blue Bill (1995) Volume 42 No. 3 : 112-116

Revised December 1999 ©Sharon David.

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This article discusses the different methods of attracting and keeping birds around during the fall and winter months.

The three main things one needs to provide to keep birds during the winter are food, shelter and water. But why feed birds during the winter? Winter brings a change in the availability of natural food. Insects become dormant and are unavailable to most bird species. While woodpeckers, nuthatches, and other insect eaters can pry grubs and hibernating beetles from under tree bark, some others are more dependent on the availability of seeds, fruits and nuts, such as grosbeaks, cardinals, and finches. Most birds supplement the natural foods that are available by visiting bird feeders for seeds and suet. This is especially true when a storm hits and their natural food becomes buried beneath the snow. As well, the days are becoming shorter and this reduces the amount of available time that the birds can forage for food, severely limiting the overall food intake per day.

There have been many questions presented on the effects of winter bird feeding: ial feeding stations disrupt the migratory urge of some birds leaving them victims of the cold weather they cannot handle?¹. Although this is a complex question and answer, most available data suggest that the effects have not been harmful, but have had the opposite effect. If a bird is not well enough to have migrated south (possibly due to an injury or some natural migratory cue not being right) and is caught in a sudden snowfall or storm, the bird could probably survive at a feeding station and make it through the winter. This has resulted in unusual overwintering of some species of warblers that

have survived at suet feeders. Since the early 1980's there has been an increase in wildlife awareness, causing more people to erect winter bird feeders. As a direct result several species that were on their northernmost distribution could overwinter successfully. Many studies have shown that several species of birds have extended their ranges northwards owing to the availability of feeding stations. Northern Cardinals, Tufted Titmice and Red-bellied Woodpeckers are examples of species that have spread into the Northeast, the Midwest and Canada. Perhaps the best example of range expansion has been that of the eastern population of the House Finch. The analysis of our Christmas Bird Count data has shown this quite well for species like the House Finch (Figure 1), Northern Cardinal and Black-capped Chickadee, that depend heavily on bird feeders for overwintering.

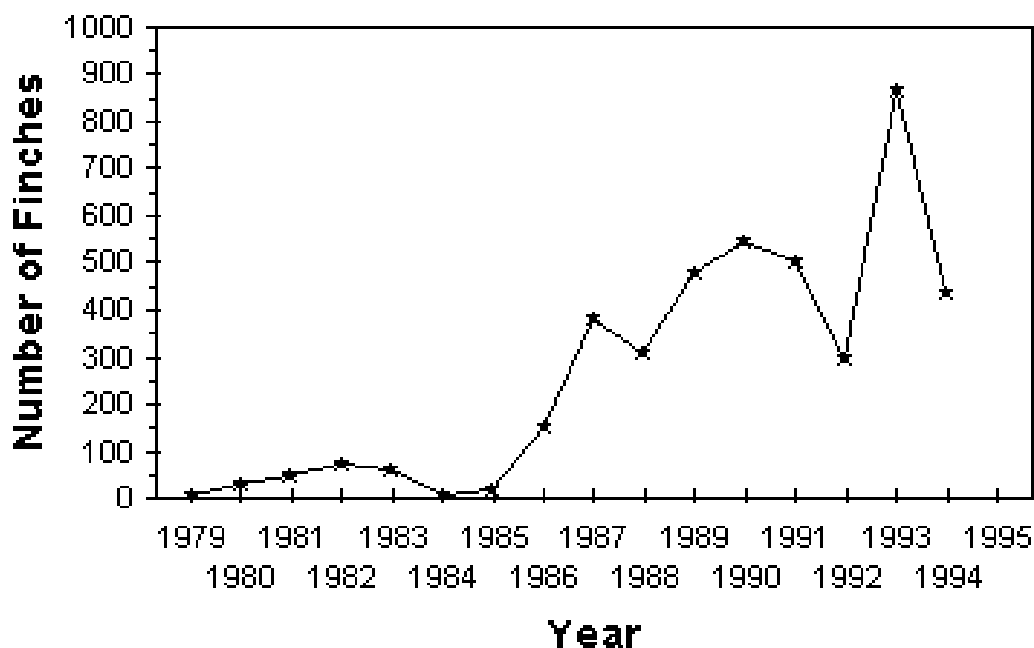


Figure 1: Invasion of the House Finch as seen from Christmas Bird Counts (1978 to 1992) for Kingston Field Naturalists.

Feeding birds during the winter is a great responsibility, and I want to stress that the birds will become dependent on you as a food source, occasionally at the expense of feeding elsewhere. As a result, one should not stop feeding during the winter months, from October through the end of April to early May, with late winter, from February on, being the most difficult period for the birds. It is also important that one fills the feeder in the morning so that the birds have sufficient time to feed during the shortened days. If you were the only person providing food to birds during those months and that food source disappeared, many birds could perish from starvation if they were not able to find a suitable food source quickly, which can often be difficult during severe winter storms. While this is my personal view and that of many others, there have been recent studies that suggest that stopping food during the winter is not detrimental to the birds. Brittingham², in a study on the winter feeding habits of the Black-capped Chickadee in Wisconsin, showed that birds obtained 20 to 25 percent of their daily energy requirements from feeders, and an additional 75 to 80 percent from natural (wild) food sources. Her study also showed that in normal winters chickadees that used feeders as a supplemental food source survived at the same rate when feeding station food was removed as did chickadees that had never been exposed to feeder food. Yet this study did show that

during severe winters the chickadees did benefit from the supplemental food they obtained at feeding stations. The survival rate of sunflower seed fed birds was twice that of birds that obtained all their food from the wild. My only questioning of this study is that it pertains to chickadees that cache their food [chickadees and Blue Jays will hide seeds in holes and cavities and remember their locations for upwards of several weeks, making it available to them during severe weather (Figure 2)]. While species like finches and sparrows, which do not cache any food, have no reserve food supply to help them if food abundance drops or if there is bad weather for a couple of days.

One error that I have found people making is placing a bird feeder in their grassy oasis of a backyard. The foremost thing one needs to keep birds coming back to your yard is providing a place to perch and hide from predators and from bad weather. Without providing a few trees or shrubs in your yard near your feeder, one probably cannot keep the birds coming back.



Figure 2: Corvids, like Blue Jays, have a throat pouch into which they can pack seeds and nuts to transport to a cache. (A) shows the empty pouch and (B) shows the pouch overfilled with peanuts.

Providing Shelter

The easiest form of shelter is by providing a pine tree. Evergreens are crucial to many birds in winter because they shield them from harsh winter winds, subzero temperatures, falling snow and freezing rain. They also provide protection against predators, like hawks and cats, that might patrol the feeders. You could remember to discard your used Christmas tree into your backyard and the birds can use it as an extra hiding spot and shelter. Or collect the neighbourhood's trees to provide more available cover. One could tie them to fence posts or set them in their traditional tree stands. The Christmas trees will be most effective if they are placed close to the feeders, and the trees will remain green right through the winter³.

Cover, where birds can quickly flit into to hide from predators or use just for a resting place, can be in the form of deciduous trees or bushes, tall grasses, or a brush pile of discard twigs and branches. The latter is useful if one does not have sufficient cover nearby and wants to provide some quick hiding and perching spots. See Trees and Shrubs as Wildlife Food for landscaping of trees and shrubs for shelter and food.

Shelter can also be in the form of nest boxes, or special roosting boxes. Nest boxes used for breeding during the summer often get used as seed caches and for night time roosting sites (Figure 3).

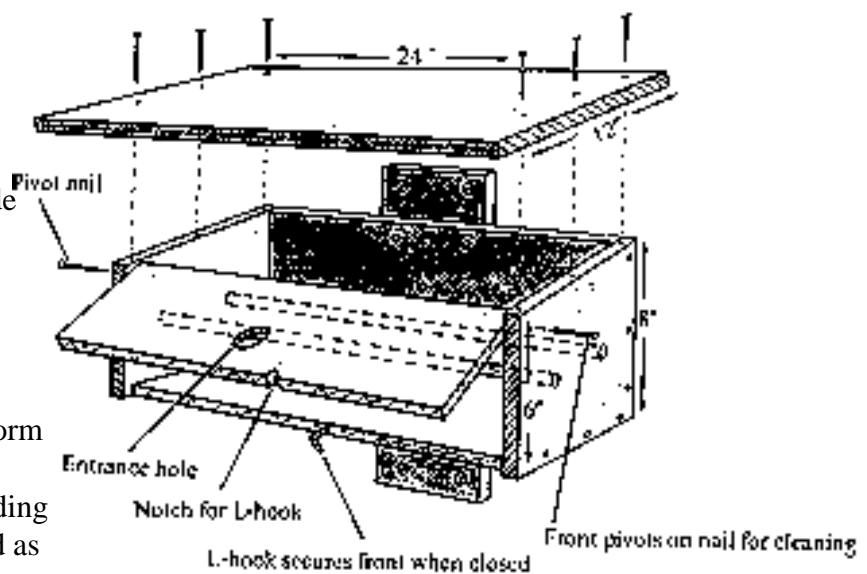


Figure 3: Nighttime roosting shelter.¹

Providing Water

While water is the least important of the three things I am discussing it can make a difference to the number of birds visiting your feeders, and will help you keep the birds. Birds need to drink within 1/2 hour of eating, so water is quite important.

While we often think birds do not need open water once the snow has fallen, this is really not true. First, there is often a critical transitory period when there is no snow on the ground, yet all the puddles and small streams have frozen over from the cold. What do the birds do then? They must fly to a large open water source, like the lake, but this can be quite a distance from your feeder and the birds might decide to stay with a feeder that is closer to the water. Secondly, snow is extremely cold and we all know how much snow we have to melt to get a cup of water. With birds, eating cold snow requires, and takes away, energy through the melting process. This is a big waste of energy when the birds are trying to stay warm in frigid conditions.

The easiest way to provide water is by maintaining your bird bath year round. This might mean filling the bath several times a day, which may not be practical for most people who work all day. The best method is to have a heated bird bath. Although a bird bath heater can be quite costly initially, they quickly redeem their cost when you have a line up of birds waiting for a drink because there is not enough room around the bath (Figure 4). I had the same heater (pictured in Figure 4) for 10 years, and it was definitely worth the \$50, but have recently purchased a newer model, which I highly recommend (Figure 5).



Figure 4: Evening Grosbeaks on winter bird bath.



Figure 5: Model 300 heater.

Heaters are completely safe, but one should make sure they have automatic shut off, or heat cycling on/off, features should the bath go dry (this might happen on windy days when evaporation rates are higher or if there are too many birds drinking from the bath). The plugs must be attached to a grounded (three pronged) outlet to prevent the possibility of electrocution. One concern with heaters is that some come with the heating element uncovered (Figure 6) and I don't recommend them since

better models are available for the same cost. Even if yours has the element covered with a protective screen (such as pictured in Figure 4 and 5) I would suggest using a piece of shale overtop the heating element that will prevent any birds from accidentally burning their feet. The birds will perch on this warm rock, especially the Mourning Doves. If you are worried about the heater baths are now sold that have a heating coil built into the bath casing (Figure 7) and you store it during the summer or leave it unplugged during the warm months (but I would highly

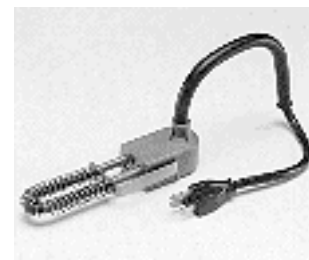


Figure 6: Coil heater.

recommend storing it). Duncraft has an amazing selection of the above baths at <http://store.yahoo.com/duncraft/wtr.html>.

Providing Food

1. Feeding Stations:

When choosing and sighting your feeders, it is the welfare of the birds that should be foremost in your planning and not your viewing enjoyment. There are many types of feeders and it is a good idea to use several types in your yard, and have a squirrel (and raccoon) guard on the pole.

The most basic feeder is the ground itself. Many birds, such as juncos and grouse, prefer ground feeding (Figure 8). However, throwing seeds on the ground can be wasteful as they will get buried under snow. Seed could be placed under evergreens sheltered from snow, or you could just let the birds on the feeders scatter the seed onto the ground. A note of caution, seeds on the ground not only attract squirrels but the feeding birds attract the neighborhood cats as well.

Pole feeders, preferably with a squirrel baffle, are the easiest to install. The poles come in sections — with the bottom section hammered into the ground. To the top of the pole can be attached a platform or other type of hopper feeder, or other finger poles can be attached and feeders hung from them (Figure 9). The feeder must be at least 1.5 m (5 feet) above ground, preferably more, to prevent squirrels from jumping up onto it. The pole should also be at least 2½ m (8 feet, more like 10 feet) from any jumping surface, like tree, fence, building or deck, as these can provide jumping sites for the squirrels who think nothing of an 8-foot jump.



Figure 9: Feeding Station.



Figure 7: Encased heater bird bath.



Figure 8: Song and White-throated Sparrows feeding on ground.

Other types of feeders include window shelves or feeders (Figure 10), and hanging feeders that can be attached to the soffit of your house or to a tree branch or pole. The advantage of the hanging feeders is that they can act as supplements to your platform feeder and, more important, each can be used to hold a specific food to attract specific species (see section 2 on foods). In this way, a species, such as goldfinch, can have its own feeding stations. Tube feeders are excellent for holding niger seed for finches (Figure 11). Hanging feeders with two or more compartments are also available (Figure 12), so that a mixture of seed types can be offered in the same unit, attracting different species to the same feeder.



Figure 10: House Finch on window feeder.



Figure 11: Goldfinch on Niger Feeder.



Figure 12: K-Feeders can provide 3 types of food.

There are also counter-weighted hopper feeders for those who are having trouble with squirrels. These feeders are weighted and lightweight birds do nothing, but a heavy squirrel will cause a door to come down over the feeding ports, preventing them from cleaning out all of the seed (Figure 13). Some feeders are designed to look like log cabins, country stores, and so on. To the birds, these designs do not mean anything, so pick your feeder for its utility, not its cuteness.



Figure 13: Counter-weighted feeder discourages squirrels from feeding (nuthatch with sunflower).

If your newly erected feeders are not used immediately, do not be dismayed. If the birds are not in the habit of visiting your yard, it may take them a few days to discover them. The birds will be the best advertisers for your feeders. Once one bird has discovered a feeder, others are sure to follow. The more species using your feeder, the more species they will attract. How long they stick around will depend on how well you have sited the feeder, types of seeds you have chosen, and if there is sufficient cover nearby.

One important note. Feeders and the ground must be cleaned regularly. Droppings can accumulate and contaminate the food and feeders. Birds could then be more prone to disease transmission. As well, wet food is not eaten by birds. Food that has become wet in rain storms, or a thaw period, begins to decompose (Figure 14). This not only clogs your feeders, and makes it look like no one is eating the seeds, but could kill the birds. Moldy, rancid food could be eaten by birds, who do not have a good sense of smell, and die of food poisoning. In the spring, or when a warm period occurs during the winter, please rake up all the seeds and hulls and place them in a secure area, preferably the compost bin, where birds cannot get access to it.



Figure 14: Bottle feeder showing dampness and seeds sprouting.

2. Foods to Feed:

While there are many books on feeding birds in winter (see the suggested reading list) I will go over a few basics. One suggestion that I always make to people is that they do not buy the premixed bags of seed. The reason is that they come with many filler seeds, such as oats and wheat, that are not attractive to most birds, and get tossed onto the ground rarely to be eaten. Depending on the types of birds you would like to attract you can buy your main seeds in bulk, preferably from a feed store since they tend to give the best prices (and one will want to save money if one is using 100 pounds of sunflower per month). I would suggest, following Table 1, that one buys from a selection of black-oil sunflower, cracked corn, white millet, niger, whole peanuts, and suet. These can then be placed out in whatever quantities that the birds will eat in one day.

Table 1: Seed Preferences of Common Backyard Birds.¹

Species	Sunflower	Cracked Corn	Niger	White Millet	Safflower	Peanuts	Suet
Chickadee, Black-capped	✓		✓		✓	✓	✓
Cardinal, Northern	✓	✓			✓		
Dove, Mourning	✓	✓	✓	✓		✓	
Finch, House	✓		✓				✓
Goldfinch, American	✓		✓	✓		✓	
Grosbeak, Evening	✓					✓	
Jay, Blue	✓	✓				✓	✓
Junco, Dark-eyed	✓	✓		✓			
Nuthatch, Red-breasted / White-breasted	✓					✓	✓
Pigeon	✓	✓		✓			
Redpoll	✓		✓				
Sparrow species	✓	✓	✓	✓			✓
Starling		✓		✓		✓	✓
Woodpecker, Hairy / Downy	✓					✓	✓

Sunflower:



This is the most favoured of all the seeds, and if one only wants to feed one type of seed this should be it. It can be easily dispensed in any hanging feeder, on the ground or on a platform feeder. The price of sunflowers fluctuates yearly, depending on the crops out west, and cost ranges from \$13 to \$18 for 40 kg.

There has been much discussion over the difference between striped and black-oil sunflower seeds and their benefits/disadvantages to birds. Through

my experience it is more of the advantage to you, the consumer, than for the birds. Both sunflowers offer similar food value. Black-oil is a small sunflower that is easily opened by all birds due to its thinner hull (especially true for chickadees, nuthatches and finches). This also makes the black-oil's hull biodegrade and compost more easily than the thicker hulled striped sunflower. The striped sunflower is often suggested for Blue Jays and Cardinals stating that opening striped is easier for them. This is a sort of true, but I have seen all my Blue Jays with a black-oil between their feet and easily cracking it open. My greatest reasoning for buying black-oil over striped is the number of seeds you get in a bag. Striped sunflowers, with their thicker hull, are thus heavier than the softer-shelled black-oil. This results in the number of seeds by weight difference to be quite large between the two. Therefore, you will probably be getting more than twice the seed per weight with black-oil. This adds up to more seeds per bird per your unit of cost. Crack open a striped and a black-oil and you will see that the seed is about the same size, but it is the shell that makes the difference.

Cracked Corn:



This is a favourite seed of most birds except the finches. This is the cheapest of the seeds you can buy for winter feeding, at \$11 for 100 pounds. Sprinkle some on the platform feeder and on the ground and you will satisfy many birds. The squirrels will also eat cracked corn. The only disadvantage that I have found is for people who are feeding it in city areas with high pigeon populations. Pigeons love cracked corn, and you may end up having them hog feeders, sometimes to the dislike of many neighbours. Should you have a pigeon problem stop feeding cracked corn, and feed mainly sunflowers, for several weeks until they are no longer checking your feeder and have moved elsewhere before placing corn out again.

Millet:



There are about three types of millet available in our area: red, golden and white. I have found that the birds seem to prefer white. Millet is such a tiny seed that one does not have to put out very much. The White-throated Sparrows and Juncos love it, so it can be sprinkled on the ground where they feed most often. The seeds are moderately priced at \$20 for 40 kg, so millet could be replaced by a cheaper, more readily eaten seed like sunflowers.

Niger:



This is the most expensive seed we can buy for the birds, ranging from \$60 to \$100 for 40 kg, or \$15 for 10 kg (watch for it on sale to save money, but not during peak feeding times — stock up for winter in spring and summer). Due to its high cost, it is usually only placed out for finches in specially designed niger feeders. These feeders have small, narrow holes where the seeds can only be extracted by the fine billed Goldfinch, Redpoll and Pine Siskin. Mind you, my Chickadees, House Finches and Mourning Doves, who love niger, have learned to knock on the niger feeder by the hole until the seeds fall out onto the tray.

Peanuts and other Nuts:



Nuts are the highest in nutrition, with lots of calories per weight, but are quite expensive. While I do know people that feed walnuts and pecans to birds and squirrels, most of us settle for the cheaper peanuts, which cost about \$8 for 5 lbs. Whole peanuts can only be eaten by Blue Jays, Grackles, the occasional Crow, and squirrels. One can enjoy watching Blue Jays go around and weigh all the peanuts on the platform feeder, and take the heaviest ones first. They will also try to fit two peanuts into their beak at once. If the Blue Jays in your area have never been given peanuts, they are not peanuts until they try them. Then they will be hooked and will come back regularly. I put my peanuts out at sunrise and the Blue Jays are always waiting. Within ½ hour they have cached and eaten all of them.

Shelled, crushed, peanuts are much more expensive than whole. I normally place these into bubble feeders (feeder with upside down feeding holes that prevents perching birds like House Finches from getting seeds) where chickadees and nuthatches are normally only able to feed, mainly when we are in the most severe weather and when late winter has set in. Shelled peanuts can be provided in special peanut feeders.



Peanut butter is also another way to give peanuts to the birds. Chickadees, Nuthatches Woodpeckers and Blue Jays will readily eat peanut butter. While people avoid using pure peanut butter due to its risks, like beaks getting too heavily coated (we all know how it can stick our tongue to the roof of our mouth), stuck shut, or birds choking on it. Most peanut butter is mixed with suet, seeds or corn meal. This diagram shows a basic 2"x2" block of wood that has ½ carefully on, avoiding any sharp edges, which is coated with peanut butter and then rolled in mixed seeds, and placed out. The chickadees just love this. The same thing can be done with a log feeder, by which holes are drilled in a log and filled with a peanut butter mixture or suet.

Suet:



During the winter, birds need high caloric foods. Suet (beef or pork fat) is one of the best calorie providers. Suet cakes can be placed out year round. These are quite expensive, at \$2.50 each (buy them in bulk when they go on sale). There are many kinds on the market these days, but I have found that most birds prefer either the plain or peanut kind. Or you can make your own suet. If you go to any butcher where they cut their own meat, you can get free, or for a nominal price, beef or pork fat. The raw suet can be placed in onion bags, suet feeders, log feeders (or peanut butter) (Figure 11) or hammered onto a piece of wood tied to the side of a tree. Chickadees, Nuthatches, Woodpeckers, Blue Jays, and Starlings will all enjoy the pure suet. You can also melt down the suet and combine whatever ingredients you want (seed, honey, peanut butter, corn meal, wheat hearts, etc.) and make your own suet cakes. The one thing you have to be careful with providing

pure fat, is that in warm weather (warm spells and when spring arrives) you have to remove the suet. Suet can spoil and the birds, which have no sense of smell, will eat it, get food poisoning and possibly die. I feed pure fat during the coldest months and then switch to the commercial stuff when spring gets close.



Hairy Woodpecker on suet



Downy Woodpecker feeding on beef fat that has been nailed to wood tied around the tree



Downy Woodpecker on upside down feeder (here I have it 45 degrees), which discourages sparrows, grackles, and other non-target species from taking the suet.

Squirrel and Raccoon Baffles:

Squirrels and Raccoons are often unwelcome guests to bird feeding stations. While many people do enjoy feeding the squirrels, they often hog the feeders which are meant for birds and so many people try (sometimes in vain) to deter them from their feeders. By placing feeders at least 8 to 10 feet from any jumping surface the squirrels can usually be deterred. If you must hang your feeder in a tree there is no way of preventing them access unless you have an anti-squirrel feeder (Figure 13). Raccoons can be a problem from late winter through late fall, removing suet and feeders and emptying them onto the ground. There is more than enough seed that gets spilt by the birds that the squirrels can find enough food on the ground. As such, the use of squirrel guards will prevent them from getting on the feeder. These squirrel guards can also be used on bird houses. There are 4 examples below (Figure 15) of good guards. These can be hand made or bought at nature and garden stores.



Figure 15: Squirrel and Raccoon Baffles.












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- ²Moorman, P. 1985. *Attracting Feeding and Housing Wild Birds*. Tab Books Inc.: Blue Ridge Summit, PA.
- ³Harrison, K. and Harrison, G. 1990. *The Birds of Winter*. Random House: New York.
- ⁴Dobson, C. 1981. *Feeding Wild Birds in Winter*. Firefly Books: Willowdale, Ontario.

Suggested Reading:

- Dennis, J.V. 1994. *Complete Guide to Bird Feeding*. Alfred A. Knopf Inc.: New York.
- Jenner, J.V. 1994. *Backyard Birds: An Enthusiast's Guide*. Michael Friedman Publishing Group: New York.
- Mahnken, J. 1983. *Feeding the Birds*. Garden Way Publishing: Pownal, Vermont.
- Stokes, D.W. 1987. *The Bird Feeder Book: An Easy Guide to Attracting, Identifying and Feeding Birds*. Little Brown Co: New York.
- Walden, B. 1991. *A Guide to Feeding Winter Birds in Ontario*. Whitecap Books: Vancouver.

Other Web Sites on Feeding Birds:

-  Backyard Wildlife: Feeding Birds [<http://www.ianr.unl.edu/pubs/Wildlife/g669.htm>]
-  Bird Feeding [http://www.cws-scf.ec.gc.ca/hww-fap/brd_feed/feeding.html]
-  Feeding Preferences of Wild Birds [<http://www.birdware.com/fpref.htm>]
-  Seed Preferences [<http://www.birdware.com/schart.htm>]
-  Overview of Wild Bird Feeding [<http://www.birdware.com/owbf.htm>]
-  Duncraft Home page [<http://www.duncraft.com/>]
-  Backyard Wildlife: Tips for Success [<http://www.ianr.unl.edu/pubs/Wildlife/g1332.htm>]
-  Backyard Bird Feeding [<http://www.bcpl.lib.md.us/%7Etross/by/feed.html>]
-  Backyard Bird Feeding [<http://www.fws.gov/r9mbmo/pamphlet/feed.html>]
-  National Bird Feeding Society [<http://www.birdfeeding.org/>]
-  Backyard Bird Feeding [<http://www.conservation.state.mo.us/nathis/birds/birdfeed/birdfeed.html>]