



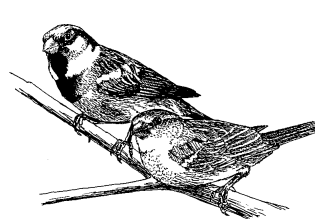
# Managing Urban Pest Bird Problems in Kentucky

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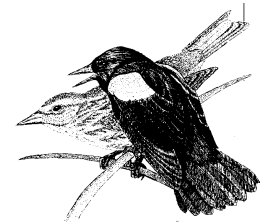
Some birds come into conflict with man as a consequence of their roosting, feeding, and nesting activities. House or English sparrows (*Passer domesticus*), European starlings (*Sturnus vulgaris*), pigeons (*Columba livia*), blackbirds, and woodpeckers are examples of this conflict. Other species, such as geese, vultures, and raptors, are not considered pests but can cause problems or become a nuisance.

Sparrows, starlings, and pigeons frequently roost or nest on rafters, window sills, and ledges. Blackbirds — including red-winged blackbirds (*Agelaius phoeniceus*), common grackles (*Quiscalus quiscula*), starlings, and brown-headed cowbirds (*Molothrus ater*) — often establish large winter and summer roosts which can create a nuisance or health hazard in urban areas. The constant tapping and hole-building activities of woodpeckers during the reproductive season can frustrate homeowners.

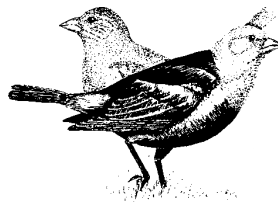
Birds can cause other problems, including the occasional cardinal or Northern mockingbird that slams into a window during spring time and other birds that create a nuisance around a feeder.



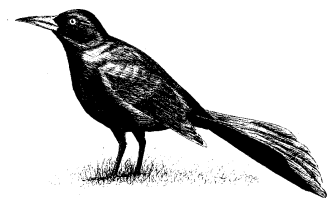
House sparrow



Red-winged blackbird



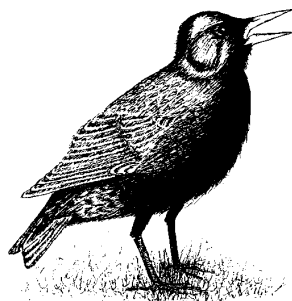
Cowbird



Common grackle

The purpose of this publication is to provide information about the control of roost problems caused by urban pigeons, starlings, house sparrows, and small urban birds. Individuals who experience problems with woodpeckers should ask the local county Extension office for a copy of the publication *FOR-39, Controlling Woodpecker Damage*. Rural landowners with starling or blackbird problems around livestock feeding facilities, in grain crops, or in orchards should request a copy of *Starling Management in Agriculture* from the local Extension office.

If a municipality or large corporation is having problems with large bird roosts, the place to contact for technical assistance is the USDA-APHIS-Animal Damage Control office. Their address is 3231 Ruckriegel Parkway, Suite 107, Louisville, Kentucky 40299. The telephone number is (502) 582-5536. These professional biologists will help alleviate large-scale bird problems.



Starling



Feral pigeon

If after reading this bulletin you decide you do not wish to manage the bird problem yourself, request a copy of publication *FOR-13A: Private Pest Control Operators in Kentucky* from your local county Extension office. This is a listing of companies that will help alleviate a problem with nuisance wildlife for a fee. The USDA-ADC office may also be able to help if problems are large scale or if a protected bird species is involved.

## **Why Manage Urban Pest Bird Problems?**

Because pigeons, starlings, and house sparrows all live in close association with humans, they can transmit diseases to humans; they are also host to parasites and insect pests that will readily bite humans. Their nesting and roosting activities can create fire hazards. Not only can their droppings deface property, they can also become a potential health hazard.

Blackbird or starling roosts are a frequent and common problem in Kentucky towns and cities because of noise, filth, odor, and health-related concerns. Starlings and house sparrows also compete for nesting sites with native bird species, including the Eastern bluebird, flickers, woodpeckers, and purple martins.

Pigeons may carry a variety of disease organisms, including toxoplasmosis, encephalitis, *Salmonella typhimurium*, and numerous others. These diseases can be transmitted to humans and may be serious if not diagnosed properly. *Salmonella* is statistically the most common cause of salmonella food poisoning in humans; it is found in about two percent of pigeon droppings.

Other serious public health hazards associated with birds include histoplasmosis and cryptococcosis. These systemic fungal diseases may be contracted by humans when they disturb accumulations of bird droppings. Histoplasmosis, common in Kentucky, is a respiratory disease caused by inhaling the spores from the fungus *Histoplasma capsulatum*. Birds do not directly spread the disease, but bird droppings enrich the soil and promote the growth of the fungus. Infection by a few spores generally produces such a mild case in humans that a person may be unaware of the disease. A more severe reaction may result in an acute case that

is often misdiagnosed as the flu. If left untreated, the individual may take several weeks or months to recover. The most serious infections may occur when the fungus is dispersed through the blood stream. These cases may become chronic, recurring at later times, and may result in blindness, loss of lungs, or even death if not treated with an antibiotic.

Not all roosts pose immediate public health problems. An active, undisturbed roost may not present a problem because the fungus cannot form spores under acidic conditions of fresh droppings. Thus, active roosts may give off only a few spores that would result in the normally undetected kind of case. Well-established, old, or abandoned roosts are a different matter. After the droppings have dried out or been leached by rain, conditions exist for spore release. If the soil is stirred up, massive numbers of spores may be released and could result in severe problems.

The following precautions should be taken when working around susceptible roosts. Individuals should wear a face mask or self-contained breathing apparatus and protective clothing (coveralls, gloves, caps, and rubber boots). Place soiled clothing in a plastic bag and wash it as soon as possible after use. Clean rubber boots before entering a vehicle.

Bugs, fleas, ticks, and mites (called ectoparasites) found on birds are another potential health hazard. These critters can invade homes and transmit disease by biting. Some of these bites cause welts and skin infections.

Birds can also be a nuisance because their droppings deface and accelerate deterioration of buildings and automobiles. Bird droppings are a common contaminant in grain destined for human consumption. Bird nests can clog drain pipes, interfere with awnings, cause electrical shortages, and make fire escapes hazardous.

## **Understanding Blackbird and Starling Roosts**

Blackbirds, starlings, and associated species form roosts twice during the year, in summer and winter. Summer roosts are formed in large deciduous trees or dense sapling stands during late June and July after nesting is completed. Thousands of birds may occupy blocks of suitable trees during the summer in urban or suburban areas, or a few hundred to several thousand

may occupy one to two trees in a backyard. The birds often abandon these roosts after leaf drop in the fall to travel to winter roosts.

During the winter, flocks of more than one million birds may assemble in evergreen or deciduous trees with dense vegetation, in thickets, or around buildings where the birds take advantage of the protective cover. Winter roosts are often found in the countryside and do not create urban problems. However, in numerous Kentucky towns and cities, there are large, well-established winter bird roosts. The number of birds using winter roosts is usually much higher than that found in summer roosts.

## **Managing Roosting Bird Problems in Trees**

Do not attempt to manage a large roosting problem (more than several trees) by yourself. Contact USDA-APHIS-ADC in Louisville for assistance and guidance in controlling large bird roosts. Likewise, if you have a well-established problem where there is a potential for transmission of diseases such as histoplasmosis, contact USDA-APHIS-ADC for assistance.

### **Dispersing a Roost with Scaring Devices**

The most effective method of dispersing small roosts is to use scaring devices. If a summer roost has formed in the same place for several years, **FORMULATE A PLAN OF ATTACK IN THE EARLY SPRING BEFORE THE BIRDS ARRIVE**. Once the roost has formed, it is more difficult to disperse. Appropriate planning is also necessary because you will need to coordinate activities with your neighbors. If a new roost has formed, do not wait to begin control activities. It is essential to begin control early before large bird populations become established.

The keys to successfully managing roosts using scaring devices is **TIMING, ORGANIZATION (PLANNING), AND VARIETY**. Timing is critical because birds are apt to leave a site that has been occupied a short period of time rather than one they have used for many nights or years. Planning is important because you will need assistance to be successful. Sometimes moving a small roost may be a simple matter of playing a bird distress call tape for several evenings. However, larger or more persistent

roosts may require a more varied approach. Using this approach, you must also use different methods, and change them often, so the birds do not become accustomed to them.

Here are the steps to take in dispersing a bird roost:

- 1.** Contact your neighbors and local authorities (city manager, police department, health department, USDA-APHIS-ADC) for help.
- 2.** Obtain a bird distress call cassette tape. The USDA office in Louisville has bird distress calls to lend. They may also lend you a pistol launcher and a small supply of pyrotechnics (whistle bombs, shellcrackers, noise bombs).

If you wish to purchase a bird distress tape call, they can be purchased from two sources:

- 1)** Applied Electronics Corp., 3003 County Line Road, Little Rock, AR 72201, (501) 821-3095 or
- 2)** Signal Broadcasting Company, 2314 Broadway St., Denver, CO 80205, (303) 295-0479.

If you need more pyrotechnics, contact USDA-APHIS-ADC or the Extension Wildlife Specialist at the University of Kentucky (606) 257-8633 for a list of companies that sell pyrotechnics.

- 3.** Obtain a tape player and external speaker to play the tape.
- 4.** If a roost is in several trees or covers several lawns, coordinate your efforts with adult neighbors. Three or more persons may be necessary to move the roost, depending on its size. Be sure to coordinate your activities for at **LEAST THREE TO FIVE EVENINGS**. Often, you will not notice a reduction in bird numbers the first or second nights. Scaring often needs to be done for four or five nights before the birds abandon the roost.
- 5.** Begin your activities about one-half hour before dark, or as soon as the birds begin to appear at the roost site. **Do not allow the birds to settle into the roost** because once birds feel securely settled in a roost, they are difficult and sometimes impossible to chase out with noise. Continue the activities until dark.

Do not continue using the scaring devices after dark because the birds get used to the noise and lights and as stated, once the birds are in the cover of the roost vegetation, especially after dark, they are extremely difficult to force out.

Be aware of when the birds actually settle in

the roost. When the birds first arrive they may perch in nearby trees and fly around. This is called staging and may continue for 15 to 30 minutes before the birds actually roost. This is the time to begin scaring procedures.

**6.** When the birds appear at the roost site, begin playing the distress calls. Begin by playing the tape loudly and intermittently for 10 to 15 seconds each minute. As the birds continue to appear, play the tape continuously. Move the tape player to various locations around the roost every few minutes.

**7.** Shooters, using pyrotechnics, should begin to fire over the tops of the roost trees. Whistle bombs fired into the incoming flocks will help turn them back. If the shooters are using shell-crackers, fire them so they will explode in front of or beneath flocks of birds attempting to enter the roost. Make sure each shooter has an ample supply of ammunition. The last few minutes before dark are critical because the birds will make a daring dash into the roost. This is the time when the firepower is needed the most.

Special care must be taken when using any of the pyrotechnic devices. Safety goggles and ear protection should be worn. When using noise or whistle bombs, fire the flare pistol at arm's length to avoid close-to-the-face explosions. Be sure to hold the thumb in front of the hammer until you are ready to fire.

If you are using exploding shotgun shells, inspect the gun barrel after each shot. Remove any wadding from the barrel using a ramrod (wooden dowel). The use of a non-choked or open-bore shotgun will eliminate this problem.

Individuals should be aware of the potential fire danger when using any pyrotechnic device. Extreme care should be used near buildings or when the surrounding vegetation is dry. Under these conditions, fire fighting equipment should be available.

**NEVER use live ammunition when attempting to disperse a roost.** It is illegal in most urban areas, and it poses additional hazards to people. There is also a possibility of killing protected birds that occasionally roost with blackbirds and starlings. In addition, crippled birds may act to decoy birds into the roost.

**8.** Continue using distress calls and scaring devices as long as birds enter the roost. After

dark, cease all activities.

Early morning scaring may be used in conjunction with evening scaring. Begin as soon as the first bird movement is detected in the roost, often just before daylight.

**9. BE PATIENT AND PERSISTENT.** On the first night of scaring, the birds will often act alarmed and circle around. Eventually they may come into a roost. It may take four to five days before the birds abandon the area. With small roosts or in areas where the birds are not established, scaring may disperse the birds the first night. Keep watch for several nights after the birds abandon the roost to be certain that none return.

**10.** You cannot predict where the dispersed flock will go. It may join flights of other birds going to another roost, or it may set up a new roost. The birds may attempt to establish temporary roosts in other unsuitable locations nearby. You must continue your scaring efforts until the birds move into an acceptable area.

If the birds are disturbed in the new location, they may move back to the old site. Be prepared to resume scaring efforts if the birds return. Once birds have been moved from one site, they become more responsive to dispersal efforts. Moving them to another site is usually rather easy.

**11.** Once the birds have moved, the habitat should be modified to discourage further roosts from developing. Thinning from one-third to three-fourths of the vegetation in roost trees will sometimes discourage roosting. The goal of vegetation thinning is to not have any interlocking canopy tree branches. Wherever possible, remove all understory shrubs and as much brush as you can.

One-time tree thinning is not a permanent solution. In a few years the tree canopy will again become dense and provide attractive roosting habitat. You must establish a regular vegetation maintenance program to keep the area unattractive to roosting birds.

**NOTE:** Do not alter habitats in roosts that have been active for more than one year without contacting state health officials because of potential health hazards.

# Managing Roosting Bird Problems on Structures

Various methods can be used to prevent pigeons, starlings, and house sparrows from roosting or nesting on ledges and rafters or under eaves and other overhangs. It is essential to use a variety of methods, changing each method often, to prevent the birds from becoming accustomed to a particular method.

## Long-term Solutions

The best long-term solution is to alter the structure to prevent the birds from landing. When the roosting surface is a ledge, this may be accomplished by placing a metal covering or board over the ledge at a 45-degree angle (or greater). Make sure the ends are closed to prevent entry. Another method of deterring birds from these locations is to install "porcupine wires." These short, heavy wire prongs stick out at various angles and prevent birds from landing. You may purchase "porcupine wires" from two sources:

- 1) Nixalite of America, 417 25th Street, Moline, IL 61265, (309) 797-8771 or
- 2) Shaw Steeple Jacks Inc., 2710 Bedford Street, Johnstown, PA, 15904, (814) 266-8008.

You can make your own angled wire spines using coat hangers. Cut six 6-inch lengths of coat hanger. Bundle them together and attach them securely to a block of wood (or directly to

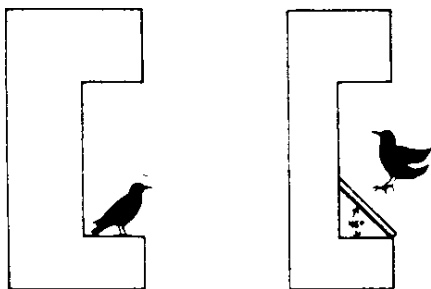


Figure 1. A board or metal covering over a ledge at a 45° angle can be used to prevent roosting and nesting.

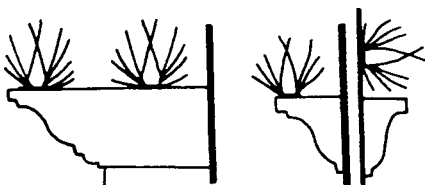


Figure 2. "Porcupine wires" can also prevent birds from landing on a structure.

the surface that will be protected). Bend each wire so the spines stick out like cactus spikes. Place as many clusters as necessary on each window sill or ledge. Wires are not always effective; in some situations pigeons have been observed building nests on them, and starlings have been observed roosting on them.

A good solution to keep birds from using rafters is to place plastic or nylon bird netting on the underside of rafters or ledges. Netting is also useful around buildings for covering windows or other openings. High value individual trees may also be covered with netting to prevent birds from using the tree. Contact USDA-APHIS-ADC or the Extension Wildlife Specialist at the University of Kentucky for sources of netting. To eliminate house sparrows from nesting beneath your air conditioner, stuff the space with paper or rags or screen it off.

## Short-term Solutions

One common method many homeowners use is a sticky repellent. These soft, sticky repellents are non-toxic materials used to discourage roosting. These polybutenes are found under a

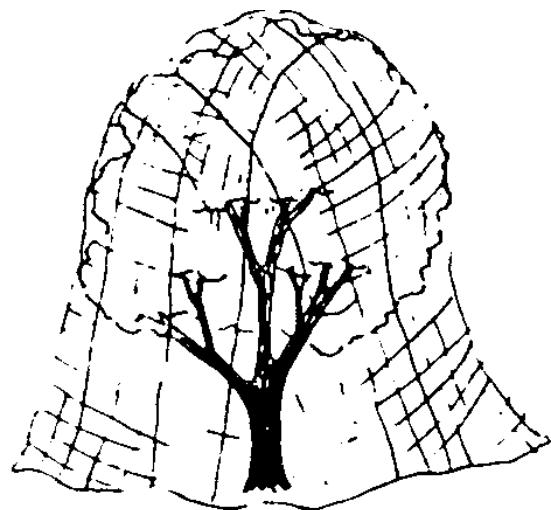
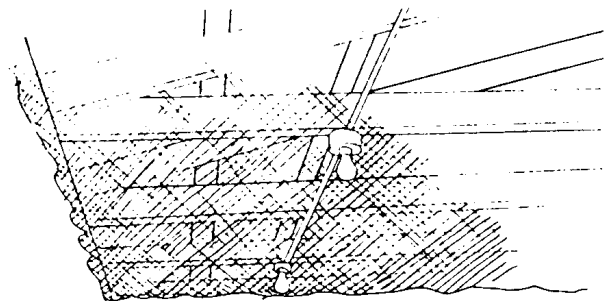


Figure 3. Netting can be used to exclude birds from rafters or from valuable fruit trees.

variety of trade names including Roost-No-More, Bird Tanglefoot, 4-The-Birds, and others. These chemicals are effective in discouraging roosting, but they are messy, they collect dirt, and they must be reapplied several times a year. For best results, place masking tape on the surface needing protection. Then, apply the repellent to the masking tape. This increases the effectiveness on porous surfaces and makes removal easier. This substance may not work well for house sparrows because these birds only need a very small space on which to cling while roosting. Use a different method to keep sparrows from roosting on structures.

Distress calls and scaring devices are seldom successful in dispersing birds from roosting on structures. If you decide to use phony owls, string-tethered balloons, aluminum pie tins, plastic wind turbines, flashing lights, or loud noise as a deterrent, be sure to move the materials to a new location every day. The simultaneous use of visual scaring devices and noise-makers seems to be more effective in dispersing birds.

## **Managing Sparrows around a Bird Feeder**

House sparrows and starlings can be a problem for people who wish to attract other birds to a feeder. To reduce the impact of these birds, lure them from the original feeder by creating a feeding station at the back of the yard away from other feeders. Place a mixture of white proso millet and cracked corn on a platform-type feeder or a bare spot on the ground.

Once you have established a separate feeding station for these birds, change the type of feed and feeder at the other location. **DO NOT FEED A SEED MIXTURE** at this feeder. Place small black-oil-type sunflower, niger, or safflower seeds in this feeder. Make it difficult for pest birds to use this feeder by using a **TUBULAR FEEDER WITHOUT PERCHES**. These feeders are easily accessible to clinging birds such as nuthatches, chickadees, and titmice. The final method of discouraging pest bird use around feeders is to discontinue feeding during the spring, summer, and early fall.

If all these methods fail, contact USDA-APHIS-ADC or the Extension Wildlife Specialist

at the University of Kentucky for information on trapping sparrows, pigeons, or starlings.

## **Preventing Birds from Slamming into Windows**

During migration some birds mistake large picture windows or glass doors for open space. Male cardinals, Northern mockingbirds, and other birds often see their reflection in a window, and during breeding season slam into windows because they mistake their own reflection for a rival male bird that is threatening their territory. Each of these situations can end with tragic results.

To keep birds from flying into windows, trick the birds with a diving falcon silhouette cut from black construction paper. Using clear plastic tape, place the silhouette in a steep, but not vertical, dive as illustrated. Use only one falcon per window. Place the silhouette in either of the upper corners.

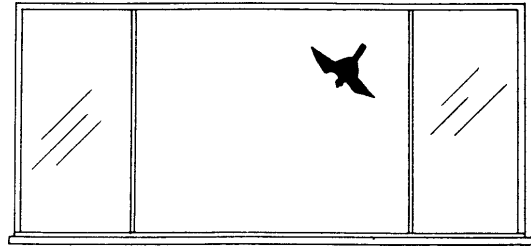
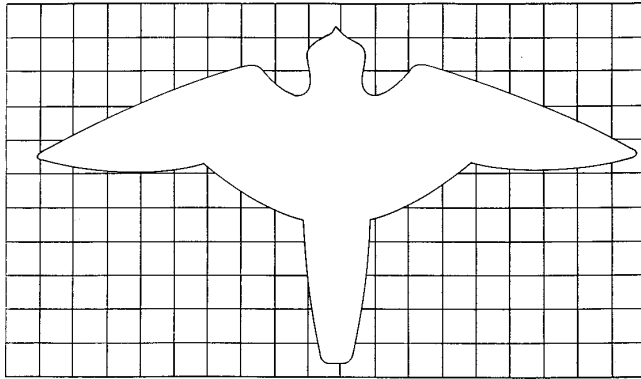
Another way to reduce this hazard is to cover the windows so birds cannot see a reflection in the window.

## **Other Controls**

To keep birds from perching or roosting on undesirable places, try a shredded newspaper trick. For example, if you do not want birds to perch on a post, tie a newspaper around its top, leaving six inches or so extending above. Shred this part of the paper. Birds will not perch on the post as long as the paper lasts. If the problem is a window sill, staple a strip of shredded paper so that the shredded ribbons lie across its surface.

If all else fails, there are several chemicals available that will frighten or kill offending birds. Chemicals can be used only on house sparrows, starlings, and pigeons with the proper permit. If you are certified to use Restricted Use Chemicals, ask your county Extension agent for a copy of the publication *Starling Management in Agriculture*. This publication explains the proper use of these chemicals. If you are not registered to use Restricted Use Chemicals, contact USDA-APHIS-ADC for assistance.

The key to successfully managing pest bird problems is to use a variety of excluding and repelling methods simultaneously.



*Figure 4. A diving falcon silhouette can keep birds from flying into windows. Cut out the silhouette to scale, color it black (or use black construction paper) and place it on the outside of a window pane with the head angled downward as shown (1 square = 1 inch).*

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