

UNPROTECTED NUISANCE BIRDS



Common names: **Pigeon** / **Starling** / **House sparrow**

PIGEON

Common name: Pigeon / rock dove

Scientific name: *Columba livia*

Biology.

Adult body length: 11 inches

Adult body weight: 13 ounces

Egg incubation period: 17 to 19 days

Broods per year: Several

Brood size: 1 to 2 eggs (usually 2) per clutch

Birth Period: Peak in spring and summer

Age at which young leave nest: 4 to 6 weeks

Activity seasonality: year-round

Primary diet: Seeds, grain, livestock feed, livestock manure, discarded food

Pest status. The feral pigeon adapts well to urban environments and is the most troublesome bird pest in urban settings as well as in small rural communities. The abundance of shelter provided by the design of many buildings assures that pigeons will have ample places to roost, loaf, and nest. Food and water is often in adequate supply, but when it isn't, the birds seek these necessities from nearby rural or undeveloped areas which are generally within flight range.

Pigeon droppings deface and accelerate deterioration of statues, buildings, and equipment and foul areas where people may walk or work. Pigeon droppings and nests clog gutter downspouts and air intakes, mar window sills, and render fire escapes hazardous. Their droppings and feathers can contaminate large quantities of livestock feed and food destined for human consumption.

The serious and constant public health problems they create are unmatched by any other bird species. They are known to carry or transmit pigeon ornithosis, encephalitis, Newcastle disease, histoplasmosis, cryptococcosis, toxoplasmosis, pseudo-tuberculosis, pigeon coccidiosis, and salmonella food poisoning. Pigeon ectoparasites include a number of bugs, fleas, ticks, and mites, some of which bite people (e.g., northern fowl mite).

STARLING

Common names: European starling / Starling
Scientific name: *Sternus vulgaris*

Biology. Adult body length: 7 1/2 to 8 1/2 inches
Adult body weight: 2 1/2 to 3 1/2 ounces
Egg incubation period: 11 to 14 days
Broods per year: 2
Brood size: 2 to 8 eggs (usually 4 to 6) per clutch
Birthing Period: Spring and summer
Age at which young leave nest: 3 to 4 weeks
Activity seasonality: Year-round
Primary diet: Fruits, seeds, grain, insects, livestock feed, discarded food

Pest status. Starlings are disliked in urbanized settings because of their raucous vocalizations made at roosting time and because of the filth (e.g., feces and nesting materials) they leave behind. Starlings create problems nesting on or in buildings. Starlings have adapted well to cities and suburbs where they utilize a multitude of roosting sites, including building ledges, lighted signs, marquees, billboard bracing, hollow lamp posts, soffits, as well as dryer and stove exhaust ducts and vents. Thousands of starlings may invade a city at dusk and roost side by side, forming solid rows of birds. Starlings also roost in trees, taking on a pest status when the trees are in a city park or close to human habitation. Not only is the roost obnoxious to the senses, but the birds are known to transmit diseases such as encephalitis, ornithosis, and histoplasmosis. Starlings, in addition to consuming large amounts of poultry, hog, and cattle feed, are implicated in the spread of diseases of livestock (e.g., hog cholera) via fecal contamination.

Lawns infested with the larvae of turfgrass pest insects are likely to be visited by flocks of starlings which feed on the insects and, in the process, punch thousands of unsightly holes in the sod. More costly damage is inflicted by hungry starlings on cereal, fruit, and vegetable crops in agricultural, orchard and garden settings.

SPARROW

Common names: House sparrow / English sparrow
Scientific name: *Passer domesticus*

Biology. Adult body length: 5 to 6 inches
Adult body weight: about 1 ounce
Egg incubation period: 10 to 17 days
Broods per year: 2 to 5
Brood size: 3 to 9 eggs (usually 5 to 6) per clutch
Birthing Period: March through August
Age at which young leave nest: 3 weeks
Activity seasonality: Year-round

Primary diet: Fruits, seeds, grain, insects, livestock feed, discarded food

Pest status. House sparrow nests, comprised of twigs, grass, paper, and string, are built in gutters, vents, soffits, lamp poles, on rafters, building ledges, and almost any other conceivable elevated, sheltered spot. They frequently build their unsightly nests inside warehouses, airport hangars, and under stadium roofs. The prolific house sparrow has become largely dependent on humans for both food sources and nesting sites. In addition to their messy nests and the contamination and defacement caused by droppings, sparrows damage rigid foam board and other soft insulation in warehouses and in poultry and hog-raising facilities. In electrical substations, their nests have been known to cause short circuits and fires. Their nesting, roosting, and feeding activities may all contribute to the sparrow's pest status.

House sparrows are implicated in the transmission of more than 25 diseases to humans and domestic animals (Weber 1979) including psittacosis, salmonellosis, and several forms of encephalitis. Sparrows in and around poultry and hog farms, because of their disease-carrying potential, are of particular concern to farmers. Beside the diseases they may transmit, a number of ectoparasites (e.g., northern fowl mite) are associated with the bird and its nests.

CONTROL OF PIGEONS, STARLINGS AND SPARROWS

Habitat modification and sanitation. Good sanitation practices, such as removal of spilled food or refuse, can do much to reduce the attractiveness of an area to pigeons, starlings and sparrows. This depends on the situation and whether or not the food source can be effectively and economically limited. The removal of nests and nest sites also may be included as part of a sanitation program.

Habitat modification is sometimes of value where starlings are roosting in street or park trees. Selective pruning of smaller, inner perching branches to open up the canopy of the trees may make them unsuitable for roosting cover.

Sparrow nests in vine-covered buildings can be difficult to locate and remove. Consideration should be given to radically trimming vines or removing them. All nests that are knocked down should be cleaned up and destroyed to prevent the birds from reusing the material and to prevent the spread of nest parasites.

Exclusion. The best permanent solution to nuisance birds that roost or nest in or on buildings is to "build them out" by making the site bird-proof. This is easily said but often difficult to accomplish. Building porticoes and balconies, exposed rafters on overhanging dock roofs, bridge bracings and other large, sheltered and recessed expanses, can be excluded using fine mesh plastic and polyethylene bird netting. Smaller recessed areas in structures (e.g., dormer corners and louvers of intake vents) can be screened with galvanized 1/2 inch mesh hardware cloth or boxed-off using sheet metal (e.g., aluminum coil stock) in situations where ventilation is not an issue. Similarly, starling and sparrow nest entry holes in hollow posts should be capped with 1/2 inch mesh hardware cloth

or sheet metal. Once birds and nesting materials have been removed from soffits, dryer and exhaust fan ductwork, vents should also be screened over using 1/2 inch mesh hardware cloth or expanded metal sections cut to size.

Harassment and intimidation. Nest destruction can be helpful in preventing pigeon populations from increasing, but to be effective the nest and eggs must be destroyed at two-week intervals. Nest removal is most effective when used in conjunction with other types of reductional control. By itself, unless carried out over a very long period, it has little effect on localized pigeon populations. To be efficacious, nest destruction must be continued until natural mortality accounts for the surviving adults.

Because the breeding period of sparrows is an extended one, the systematic destruction of nests and eggs at 10- to 12-day intervals will reduce reproduction and may eventually move the birds from a building. However, recolonization by evicted sparrows, as well as new arrivals, often will occur on buildings previously cleared unless some other corrective action is taken.

Starlings can be repelled from night roosts with recorded starling distress calls. For best results, such distress calls should be initiated as soon as the birds begin using the location and should be continued until they leave. Three to four consecutive evenings is generally adequate to displace the birds to another roost, hopefully less objectionable. However, if after six to seven days, the birds have not moved, the technique should be reevaluated or discontinued. Scaring must begin early in the evening when the birds first begin to arrive and when there is sufficient light for the starlings to find alternate roosts. When repelling large numbers of starlings, a risk always exists that the new or alternative site selected by the birds will also be objectionable to humans.

Most visual devices (e.g., raptor silhouettes, plastic owls, rubber snakes, scare-eye balloons, Mylar/metallic-reflective tape, various reflective objects moved by breezes, flashing lights and the like) and auditory-based devices (e.g., electronic distress call emitters) commonly used for scaring away nuisance birds are of only temporary value at best. The longer a roosting site is used, the more difficult it is to displace the birds.

Repellents, deterrents and barriers. Clusters or arrays of sharp pointed wires, anti-landing projections, such as wire or plastic prongs, sheet metal spikes, and looped wire have proven to be effective as physical barriers in preventing pigeons and other birds from perching on building cornices, ledges and beams. The temporary discomfort inflicted by the spikes or the inability of the birds to light causes the birds to avoid these surfaces. Several kinds of these devices are commercially available in strip form that can be installed by Rottler technicians. Porcupine wire or strips of sharp projections can be permanently installed on ledges, rafters, window sills, or other locations where birds might roost, loaf, or nest. Wide surfaces may require two or more parallel rows of projections. The expense of the devices and their installation can be substantial but their permanent efficacy often justifies the cost.

Nuisance birds also can be discouraged from landing on ledges by installing thin wires supported by short posts and pulled taut by small springs. The wires are installed at varying heights spaced 3 inches apart across the width of the ledge. Likewise, pigeons can be kept from roosting on support cables, pipes, and narrow beams by stretching taut a piano-type wire about an inch or two above the item or surface. This wire is too small for them to light on and prevents them from perching on the surfaces beneath.

Installation of insulated electrified wires on roosting surfaces can be highly effective in deterring nuisance birds from landing. The wires carry high voltage but low amperage current similar to cattle-type electric fences and intermittently shock the birds without killing them. This measure offers a long-term solution in keeping pigeons off building ledges. However, such installations are not without some problems, for they can be shorted out by accumulations of dirt on insulators and by sticks and debris which may fall on the wires.

Live-trapping. Live-trapping of pigeons is not a method employed by Rottler technicians, but can be a very effective method of control. A variety of traps have been used, including loft traps, funnel traps, and bob-type walk-in traps. With few exceptions, the bob-type trap is the most effective. The size of these traps varies considerably, from being several feet in each dimension, to only 10 inches high and 18 to 24 inches in width and length. Regardless of size, the bob-type traps all work on the same principle. The door or entrance through which the pigeons are lured consists of a row of evenly spaced, one-way, free-swinging wire pieces (bobs). The bobs allow pigeons to push them upward and inward to enter the trap but prevent their exit. Grain (e.g., wheat, milo, or cracked corn) is scattered at the door entrance to entice the birds into the trap. One to three live decoy pigeons in the trap greatly improve trapping efficiency. Water and food have to be provided for the decoys. Live-catch traps should be serviced frequently to remove captured pigeons. Various methods are used for disposing of trapped pigeons, but in no case should they be taken away from the area and released, for the pigeon's homing ability can defeat any trapping and release program.

A variety of traps have been used to control sparrows, but the funnel trap has been the most popular and, generally, the most effective. Funnel traps are commercially available or can be constructed from available plans. They come in a variety of sizes ranging up to 24 inches wide and 6 to 8 feet long, but their basic trapping principle is the same. The wire mesh trap of 1/4 or 1/2 inch mesh hardware cloth consists of two compartments; the birds enter the first chamber through a funnel entrance that is at floor level. In their effort to escape the first compartment, they inadvertently find their way through another small opening which is at the apex of the second funnel that takes them into the holding compartment of the trap. Escape from this compartment rarely occurs. The birds can be removed through a small door. The traps should be serviced regularly and the removed birds destroyed in an acceptable manner. By providing food and water, several birds can be left in a trap as decoys. Funnel traps can be used effectively in areas where sparrows are in the habit of feeding. They can be baited with canary grass seed, cracked wheat, milo, or corn, or with chick feed.

Although it is time consuming, sparrow-trapping can be effective. Trapping success often varies dramatically with the season of the year and the availability of food in the vicinity. Other kinds of sparrow traps are available on the market but few can match a good funnel trap in capture success.

Chemical Control

Repellents. Several polybutene caulk-type sticky repellents are available for application to ledges and beams where nuisance birds may roost or nest. These non-toxic tacky materials are designed to cause the birds to avoid the treated surfaces but not entrap them. The material is applied in closely-spaced wavy beads on the edges of roosting surfaces. To repel sparrows, a tight application pattern is important because of the sparrow's ability to light on narrow ledges and small objects. While the gel form is the most popular, some tacky repellents are available in viscous liquid form to be sprayed or brushed onto surfaces. Small squeeze tubes and aerosol cans are also marketed for convenient application over relatively small areas. Even though they effectively repel birds in many situations, a drawback of sticky repellents is the likelihood that dust, falling leaves, and other airborne debris will soon coat the treatment, creating an unsightly mess and negating the repellency of this measure. Some are also adversely affected by temperature extremes. Certain brands of sticky repellent are formulated to be misted with a chemical top-coating that resists adhesion by leaves and other debris. A few sticky-type bird repellents are suitable for spraying on trees limbs where sparrows, starlings, or blackbirds may be roosting. Reapplication of sticky repellents is usually necessary in order to maintain maximum effectiveness.

Hallucinogenic and toxic baits. The hallucinogenic frightening agent Avitrol™ (4-aminopyridine) is available as a bait or concentrate and is quite effective for pigeon control. Avitrol is lethal to the birds that ingest sufficient quantities, but prior to death, the affected bird, depending on the species, may display erratic behavior and emit distress cries that, in turn, frighten the other birds of the flock. The treated bait is diluted with clean grain to limit the number of birds that will actually consume a biologically active dose. In this way, by dosing a relatively small number of birds, the material is capable of producing flock-alarm reactions which repel the rest of the birds from the area. The dilution rate used has a significant influence on effective results. Pre-baiting with whole corn or corn chops is essential to establish pigeon flock feeding behavior prior to baiting with treated grain. Repeated application of bait may be required until the population ceases to return to the area or until an acceptable population level is attained. After an initial success, bait need only be applied on-site periodically, following prebaiting, to keep pigeons from returning.

Avitrol™ does not lend itself to targeting starlings in most urban roosting situations because it must be consumed in baits, and starlings generally do not feed at the roost site. Sometimes, baiting can be accomplished on a nearby rooftop or other secure site using the Avitrol™ concentrate formulation mixed with pieces of bread or French fries. In rural settings, Avitrol™ is effective for repelling birds from feeding sites such as cattle feedlots, dairies, and hog and

poultry farms. Although Avitrol™ is registered for sparrow control, these birds are not easily frightened. Successful results with sparrows often rely on the associated mortality in the chemically affected birds to reduce the population. Both pre-baiting and subsequent baiting should be conducted in those areas where feeding has been observed. Sparrows are ground feeders, but they will feed from V-shaped troughs and flat feed trays strategically placed in or near sparrow nesting or roosting sites. Consideration must also be given to possible adverse public reaction to poisoning birds.



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