



achieve positive results. In a city of any size, it is impossible for all the official agencies that touch upon the general sanitary condition of the community to exercise complete day-to-day control of the environment so that no food and nesting materials are available to pigeons. In view of the fact that pigeons are general feeders, nest in many kinds of situations, and are very prolific, it is evident that a good pigeon reduction program must include every activity listed in the "permanent control" section. Food control measures and exclusion of the birds, combined with such temporary, secondary means of reduction as nest elimination and trapping as needed may be necessary.

Since voluntary compliance may be difficult to attain in this sort of activity, and most of the birds appear to be ownerless, legislation may be needed to help accomplish the needed reduction in the pigeon population.

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PIGEON CONTROL


The common pigeon *Columba livia* (the Rock Dove) is present in a wild or ownerless state in many cities. Some cities have areas, in which the population level is high, and there are also large areas in which the level is low, but the birds are still noticeable. This bird is a scavenger, much like the Norway rat. Reasons for the need for pigeon control, biology of the bird, and methods of control and their limitations are given within.








NEED FOR CONTROL

 Diseases may be carried by these birds and transmitted to humans. *Ornithosis* (or psittacosis; commonly called parrot-fever) is found in pigeons, the population of which may serve as a vast reservoir for the organism. *Cryptococcosis* is another disease caused by a fungus found in pigeon droppings that may infect humans. *Dermatitis* can be caused by bird mites living on the pigeon that often migrate from the nests and bite people.

 Defacement of buildings, vehicles, trees, shrubs, lawns, benches and fountains in parks, by excrement occurs where the birds habitually congregate. The removal of the excrement is an additional cost of maintenance.

 Odors may be produced by droppings, feathers, and nesting materials.

 Flies may develop in large numbers in accumulated moist manure that is protected from drying in sheltered roosting and nesting areas.

 Noise may be produced by these birds; this unwanted sound is obnoxious to some people.

designated, limited locations. If this restricted feeding is allowed, then clean-up at regular, specified intervals must be included in order *not* to provide food for rats and mice. Provision for reduction of nesting, roosting space/areas and preventive exclusion in new construction, as well as buildings being remodeled must be included. Some cities have laws forbidding the keeping of farm animals within municipal boundaries. The laws may also restrict the keeping of pigeons, although homing and racing pigeons may be allowed.

The ordinance might be based instead on a prohibition against pigeons flying at large, except banded pigeons (which may fly only under specific conditions), with provisions for the pigeons at large to be taken up and impounded.

EDUCATION OF PUBLIC

The public must be informed of the need for pigeon control. Emphasis should be on the reduction of feeding of wild pigeons.

SUMMARY

Good pigeon control depends upon good food control and firm and persistent activities in eliminating nesting and roosting places. Both food and nest control are related to the state of general sanitation in a community. General sanitation must be good and must be kept that way in order to



scattered outside the trap to act as an attractant. Drinking water must be put in the trap. Trapped birds should be removed at least twice a week and disposed of in a humane manner (check local regulations).

5. Removal and Destruction of nests and eggs is useful in reducing the pigeon population. Nests need to be removed every two weeks. Treatment may be required for *bird mite* populations.

6. Chemosterilants: Feeding female birds OvoControl (nicarbazin 0.5%) interferes with the development of the vitelline layer separating the egg white and yolk. This membrane is vital to the viability of the egg and without it the egg cannot develop or hatch. Nicarbazin has been tested in mallard ducks, Japanese quail, feral pigeons, Canada geese, domestic turkeys, chickens and Pekin ducks. While all avian species are considered sensitive, different doses are required to achieve the optimal contraceptive effect.

7. Poisoning or Shooting is not recommended and is illegal in most cities.

LEGAL RESTRICTIONS

Ordinances controlling feeding of wild pigeons can be useful in alleviating the pigeon nuisance problems. Such ordinances might not contain an outright prohibition of feeding wild pigeons, but may provide for their being fed at certain



Safety of pedestrians may be endangered by slipping due to the presence of excess bird droppings on walk-ways.



A hazard to Aircraft may result from large numbers of pigeons.



BIOLOGY

It is important to know the biology of pigeons in order to understand the methods of control. The birds tend to stay together. For roosting, the birds usually prefer larger, higher buildings, although small, low buildings may be selected if close to food. Nests are made of small twigs, pieces of string, paper, and cloth obtained from any source possible. The nests are built on roofs, ledges large enough to accommodate the nest, openings in buildings, and even drain spouts. Pigeons try to nest as close as possible to a constant food supply. A pigeon couple may have two nests.

Reproduction

Pigeons are monogamous, and eight to twelve days after mating, the female lays one or two eggs. The male cares for and guards the female. The young leave the nest between the age of 4 and 6 weeks. Often, more eggs are laid before these young ever leave the nest. An adult female pigeon can have about 15 surviving young a year. These birds have



a life-span up to 15 years. The breeding cycle is almost continuous although the number of young hatching varies somewhat by season. An adult pigeon consumes about one pound of food per week. Pigeons can live up to a week without food. The pigeons preferred food is mainly whole grains and greens, but the birds will thrive on bread crumbs, pop corn, and miscellaneous food scraps (including in open garbage cans and spilled garbage). Pigeons may fly several hundred miles during a day, usually returning to the same nesting spot.

CONTROL MEASURES

It is not possible or desirable to eradicate all the pigeons in a city. It is possible to reduce the population to a tolerable level. Methods may be used to reduce the population quickly and directly or slowly and indirectly. Emphasis should be placed on methods which will bring about a long-term maximum population reduction with the least amount of effort and expense.

Many different methods have been used to control pigeons. The measures may be divided into two categories: *permanent control* and *temporary control*. These methods will be discussed; legal and other approaches will also be discussed. It should be noted that some of the same conditions which allow the production of large pigeon populations may allow for the development of a large rat population.



of adhesiveness. Physically these are semi- solids (jelly entanglements, adhesives) or liquids (sprays).

Entanglements may be applied relatively easy to smooth, regular, easily accessible spots. These materials may be applied by means of caulking guns to favorite roosting spots. Two or three bands must be applied to ledges and all space used by birds must be treated. Numerous small bands of material are more effective than one wide band. Entanglements have to be checked and renewed regularly.

Sprays may be used on flat areas; strips totaling 25 - 30% of the area are needed. Trees may be sprayed with a water-based spray. These chemicals are available from wholesale suppliers only and should be applied by pest control firms.

Naphthalene flakes are registered as a repellent. They may be applied in enclosed areas such as attics or between walls. However, avoid breathing of the vapor which is toxic (Always follow product label instructions).

3. Electric shocking equipment in the form of fencing, may be used; the low voltage gives a mild shock. This is an effective device, expensive, but long-lived if installed and maintained properly.

4. Trapping is a measure that can be effective if carried out with persistence, but it is slow and tedious. Traps should be placed in areas where birds feed and will not be molested. The traps should be well supplied with feed of the type the birds are already eating. A good bait is one made of one part wheat and five parts cracked corn. Corn has been found to be an excellent bait. A little bait is



B. Temporary Control should only be used to supplement permanent control measures. Temporary methods are less effective and when used on a large scale are costly. Several types may be used at a time. The use of some of these methods may cause an adverse public reaction. Some of these methods merely make the birds relocate.

1. Frightening Agents: There are two types:

Physical and Chemical

Physical agents such as whirling strips and spirals of bright cloth or metal are occasionally effective but usually have little effect. Simulated owls or other predators give similar results. High frequency sound (ultrasonic sound inaudible to humans) has **no** effect on pigeons.

The *Chemical agent* 4-Amino pyridine, marketed as Avitrol (trademark), is classified as a frightening agent since upon ingestion by birds, it creates distress behavior in the birds and frightens other birds away. It is a *Restricted Use Pesticide* and therefore can only be used by a certified applicator. If not used properly it can cause high mortality in the birds. The proper blend of the chemical and whole corn attractant can result in very low bird mortality.

2. Repellents and deterrents have been used to keep birds from staying in one spot. Some repel because of an irritating factor and others because



A. Permanent Control

1. Food Control if accomplished correctly, is the most practical control method and less costly than temporary measures. It is a basic means of population control since it deprives the birds of material without which they cannot survive.

a. Garbage must be stored in sturdy cans with tight-fitting covers. Garbage must be handled carefully and not be spilled on the ground at any time. Uneaten food for domestic pets and other backyard animals must be removed after feeding time or protected from pigeons. Grain mills and animal feed lots attract pigeons; spillage must be controlled and the birds kept out.

b. Food purposely provided by the public in parks, backyards or other areas is one of the major sources of sustenance for birds in cities. Discouraging this practice is a difficult but absolutely necessary aspect of pigeon control. The pigeon population will vary directly in proportion to the amount of food available to them. Pigeons can survive very well in the wild away from cities without humans feeding them.

c. Food control at nature centers, parks, and zoos are especially difficult. The amount of food put out for animals at zoos must be strictly rationed and protected. Additionally, some structures may need to be pigeon-proofed.



2. *Exclusion* is the modification of buildings or other structures in such a way that the birds cannot enter, roost (hang out), or nest in or on them. Exclusion is be divided into interior and exterior exclusion.

a. *Interior* exclusion involves blocking or modifying access to indoor roosting, feeding, and nesting places. Openings may be blocked with wood, metal, glass, masonry, or hardware cloth. The last material is used when ventilation is involved. Pigeons are excluded by 1 1/2" mesh and rats by 1/2" mesh hardware cloth. Seventeen gauge, galvanized material is preferred. Materials should be installed in a manner that results in no outside ledges or projections being provided for birds to roost.

b. *Exterior* exclusion is the removal, blocking, or modifying of all surfaces so that pigeons cannot nest or roost upon them. Where ledges are not wide (6" or less) light metal, such as sheet aluminum, can be installed at a 45 degree angle to present a slope on which the bird cannot rest or nest. Hardware cloth can also be used. End sections of this flashing must be closed in order to keep birds out.

Projecting signs, decorations, and off-set edges should be removed whenever possible. If removal is not possible, boxing in exposed areas or complete remodeling may be needed. Old sheds, abandoned buildings, junk piles, and the like should be removed. In some instances, "porcupine wires" may be used. These are flexible, rust-proof



bars or strips on which about 120 needles per linear foot are set in the form of half-circles. The strips come with fasteners designed for a particular surface. The strips may be attached to most types of surfaces. A similar device uses looped "wickets". These devices are effective, especially in limited areas, such as a ledge over a doorway; they have been used on ledges, ornaments, signs, dormers, and roof gutters. Installation can be expensive and difficult.

There are many commercially available pigeon exclusion systems, as well as companies that specialize in bird exclusion.

Pigeons may build a nest on "porcupine wire" by building up a basic protective layer of sticks and straw. Falling leaves may nullify the effectiveness of the strips.

Exclusion gives permanent control providing: (1) installation was done properly, (2) unprotected doors, and windows are not left open, (3) and repairs and new construction maintain the exclusion integrity of the structure.

Routine inspection and prompt repair are essential to effective pigeon exclusion system. Provisions should be made for effective pigeon exclusion in new construction and buildings undergoing remodeling.