

Title:	THE CASE FOR THE HUMANE CONTROL OF PIGEONS
Autor:	-
Web:	<a href="http://www.animalaid.org.uk/campaign/wildlife/pigeons.htm">http://www.animalaid.org.uk/campaign/wildlife/pigeons.htm</a>
Commentaries:	<b>An advisory document for local authorities, public sector bodies, businesses and others with an interest in pigeon control.</b>

## Pigeon control, an introduction

**Pigeons are one of the few species of wild animal with which town and city dwellers have regular contact, so they are popular with a lot of people. However, the cost of cleaning their droppings from buildings and statues can be considerable and pigeon welfare can be adversely affected by overcrowding.**

There are many places world-wide where attempts have been made to control pigeons by culling. Culling methods have included poisoning, shooting with air rifles and trapping. However, modern scientific research (1) shows that culling is completely ineffective, as bird numbers can increase above pre-cull levels within weeks of the cull being carried out.

### Why is culling promoted?

Pest control companies are fully aware that culling is ineffective but they continue to recommend this option because it ensures that they will be offered a lucrative long-term contract.

### Why is culling ineffective?

In areas where culling is carried out, there will be an initial reduction in pigeon numbers. However, this effect is very short term as the population will almost certainly have returned to or even exceeded the previous level within a few weeks. This is because pigeons control their own numbers according to the food source available.

Approximately 90% of pigeons die in their first year and the main cause of death is starvation. The mortality rate of adult pigeons is very low, typically around 11% (2). Therefore when culling is carried out on a pigeon population, the vacancies left by the dead birds are quickly filled by young birds.

This means that killing adult pigeons in a flock discriminates in favour of young birds who would otherwise have perished. It has no long-term effect on the level of population, as it merely rejuvenates the flock.

A culling programme was carried out in Basel, Switzerland; a city which had a population of approximately 20,000 pigeons.

From 1961-85, 100,000 pigeons were culled by shooting and trapping. Despite this, the population remained stable.

In 1988 a group called Pigeon Action was founded to establish an ecological and long term solution to the city's pigeon issue.

They began a programme of public education campaigns which warned against feeding pigeons and installed pigeon lofts from which eggs were removed. As a result, the population was halved within four years.

### Other arguments against culling

Culling is an extremely expensive option, as a long-term contract with pest controllers will have to be entered into because regular repeat culls will be necessary. Culling by poison puts other species at risk because it is both indiscriminate and because poisoned birds will affect other animals in the food chain. Cats and birds of prey may consume poisoned pigeons with fatal results.

Narcotics have been used to stupefy pigeons and make them easier to catch. However, this culling method can have disastrous consequences, with drugged birds disrupting traffic and smashing into buildings. This happened in Perth, Australia in 1999. Narcotics and poison are both very inhumane as the pigeons taking the bait will die slowly and may suffer dehydration and hypothermia.

Shooting is a widely-used culling method which also results in suffering as the majority of birds shot are wounded, rather than killed. There have been many reports of injured birds being thrown into bin bags or stamped upon by pest control operatives. Young chicks are also left to slowly perish.

Trapping of pigeons is also widespread. Apart from the risk that trapped birds are sometimes left to die from exposure, this culling method is also very time-consuming and expensive.

### What are the alternatives?

There are three approaches to pigeon control which do not involve culling. They are the use of **deterrents**, the installation of **artificial nesting sites** and **public education** campaigns.

#### Deterrents

Deterrents such as spikes, holograms of owls' eyes and wire systems can be very effective at preventing pigeons from roosting on buildings.

Netting is often used on buildings, but it can result in young flightless birds being trapped behind it and flying birds can become tangled and injured. The RSPCA and wildlife groups receive thousands of reports every year of pigeons and other birds trapped by netting.

Trained raptors (birds of prey) have been used in some areas to drive away pigeons. These birds are trained to chase, but not kill pigeons and can successfully drive a flock elsewhere. In some enclosed sites, such as railway stations, the use of raptors

can be extremely effective. However, this method is expensive and will only work on a specific site, so is unsuitable for large areas.

The use of falconry to control pigeons involves pigeons being caught and killed. Nottingham City Council tried this method in 1999 but the sight of pigeons being attacked by the bird resulted in public distress, lots of negative publicity and cost thousands of pounds, whilst having no overall effect on pigeon numbers.

The problem with all deterrent methods is that the pigeons driven away from one site will simply re-locate to another, equally unsuitable site. Therefore, this form of control has limited use unless employed in conjunction with other methods.

#### **Artificial Nesting Sites**

Dovecotes or nesting boxes can be constructed and installed for a low, one-off cost. Once the pigeons have been encouraged to roost in these sites, their eggs can be collected regularly and destroyed. This is a simple, fast and very effective way to reduce pigeon numbers. It is also humane, as no killing is involved. Another advantage of dovecotes or nesting boxes is that they provide a way to move pigeon flocks away from sites where they are considered a nuisance to sites where they will pose no problems. Designated feeding areas can then be set up for public use.

#### **Public Education Campaigns**

The only effective long-term method of reducing pigeon populations is to manipulate their environment in such a way that they can no longer eat or roost easily. Each breeding pair can produce up to ten chicks per year if they have an abundant food supply, but if available food is reduced, their breeding rate slows down and can even stop altogether.

Large numbers of people regularly feed pigeons in the belief that they are caring for the birds. Litter also provides an abundant food supply to pigeons in towns and cities. As the mortality rate of adult pigeons is so low, there is strong competition for food and breeding sites.

Pigeon overpopulation is caused by large quantities of food being provided by the public. **Therefore, it is essential to educate people to either stop feeding pigeons or to do so in designated areas near artificial nesting sites.**

In Basel, Pigeon Action embarked on a campaign to convince the public that feeding pigeons harms them, as it causes overpopulation. They produced leaflets and posters and distributed them widely. These featured pictures of baby pigeons infected by diseases and pushed the point that overcrowding is bad for pigeons as well as people.

A successful publicity campaign will result in a large reduction in people feeding pigeons and will impose a very effective limit to their population size. Sheffield City Council produced colour leaflets which explained clearly to people why they should stop feeding pigeons. Leaflets such as these, together with signs in the relevant places should ensure that the message gets through.

### **Case studies**

#### **Nottingham City Hospital**

Following a visit from Guy Merchant of PICAS in May 2000, the hospital suspended lethal culling of pigeons.

An on-site pest controller was employed, who proofed many sensitive areas and installed nest boxes on several large flat roofs which were heavily populated by pigeons. These were made from recycled staff lockers. The pigeons were then provided with food, water and nesting materials near the boxes in order to encourage the birds to roost there. The pest-controller visited these roosting sites daily in order to remove eggs. Hatchlings were left alone.

The result: "The impact on the trust has been dramatic. In less than a year, the bird population has reduced by an estimated 50%. The cost of cleaning fouling has also reduced significantly." Statement made in March 2001 by Clive Young, Environmental Services Manager at Nottingham City Hospital NHS Trust.

#### **Barking and Dagenham District Council**

As a result of public pressure, this Council decided to explore alternatives to culling pigeons. A colour leaflet was produced which urged the public not to feed pigeons and to dispose of food litter properly.

Council properties, including high-rise flats were proofed in order to reduce the potential breeding sites available to the pigeons. In July 2000 a dovecote was opened in the park which had been identified as the main public feeding site. This generated a lot of very positive publicity.

This Council took some very positive action to reduce pigeon numbers, but their dovecote was designed with aesthetic appearance as the priority, rather than its attractiveness to pigeons and many nearby buildings were not proofed.

#### **Railtrack**

Railtrack abandoned culling at London mainline stations in 1999 and began to employ the services of a trained raptor and handler, as advised by PICAS. This proved extremely successful and other train operators are now exploring this option.

#### **Summary**

**Lethal control of pigeons by culling has been consistently shown to have no long-term effect on population levels. It is also expensive, inhumane and can result in very negative publicity. Extensive research and recent case studies have shown that the use of artificial breeding sites, combined with egg removal, proofing of buildings and public education campaigns can result in a long term reduction of pigeon populations by as much as 50% within months. These control methods are humane, cost-efficient and will generate positive publicity.**

#### **For more information:**

#### **Pigeon Control Advisory Service (PICAS)**

Tel/Fax: 02392 583540

[www.picasuk.com](http://www.picasuk.com).

#### **Commercial and General Interiors Ltd**

Whitney Road, Daneshill East, Basingstoke, Hampshire, RG24 8NS.

Tel: 01256 479 624 Fax: 01256 816 734 [cqilimited@aol.com](mailto:cqilimited@aol.com)

Makers of dovecotes.

## J Lacey Steeplejacks

50 Bickford Road, Witton, Birmingham, B6 7EE.

Tel: 0121 327 6376 Fax: 0121 327 6256

Pigeon-friendly company which provides nationwide proofing.

### Further information about pigeons

The feral pigeon is descended from the rock dove whose natural habitat is cliffs and caves. Large buildings and statues offer pigeons roosting sites which closely resemble these. This, combined with their resourcefulness, tendency to scavenge and lack of territorial aggression has led to large flocks of pigeons living in close proximity with people.

Although it is widely believed that pigeons carry and spread diseases to people, there is very little evidence that pigeons jeopardise human health. (3) Pigeon lung disease is an allergic reaction which affects some people who have prolonged contact with pigeons in confined places. It is easily treated if diagnosed early and can be avoided by wearing a mask if in contact with pigeons in a dusty environment.

**"It is absolute nonsense ... to suggest that pigeons present a health hazard and presumably need eliminating for the well-being of the nation's health." David A Palmer, BVSc, MRCVS**

**"There is no evidence to show that they spread disease." Mike Everett, RSPB**

### References:

1. Regulation of the Street Pigeon in Basel by Daniel Haag-Wackernagel. Article published in Wildlife Society Bulletin, 1995.
2. From an article by D. Haag published in Swiss journal, Ornithol Beobachter. No. 87, pg 147-151.
3. Pigeon Lung Disease Fatality and Health by David A Palmer B. V. Sc. MRCVS.

Title:	Alternatives to Lethal Control
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Commentaries:	

Between 1988 and 1990 the City of Basel in Switzerland introduced a massive public information campaign to educate the public about pigeons and the relationship between feeding and the resultant overpopulation. Alongside the education campaign the government asked the University of Basel to carry out a scientific study to find a solution to the problem of overpopulation of pigeons in the city. The city had a population of approximately 20,000 pigeons and had tried everything to reduce the population, including killing over 100,000 birds by trapping and shooting in the preceding 24 years. In 1988 a count revealed that Basel still had a population of 20,000 birds. It became obvious that the lethal control policy had been totally ineffective and that the problem had to be tackled at source. The source of the problem in Basel was the persistent feeding of the birds by residents in the city.

The well-documented and highly respected research, carried out between 1988 and 1992 by the University of Basel, concluded that killing pigeons had no effect on the pigeon population in the city and in most cases resulted in an increase in pigeon numbers. The research team decided that they had to look at completely different and quite diverse ways of overcoming the problem. The connection had been made between feeding and overpopulation, so if food could be restricted and if the birds could be stopped from breeding, numbers should drop. The idea of providing artificial nesting sites where eggs could be removed was put into practice. The research team provided 9 designated feeding areas where the public could legitimately feed the pigeons. Adjacent to these areas they built well-kept and controlled pigeon lofts where the local pigeon population was encouraged to nest and roost. These lofts were visited and cleaned on a weekly basis, and any eggs that had been laid the preceding week were removed. During the 4-year research period over 1200 eggs each year were removed. Over a 50-month period this had the effect of reducing the pigeon population in these test sites by a staggering 50%. Not only were pigeon numbers halved, but also large quantities of pigeon droppings were removed from the lofts. In 1992 alone 1,050 kg of droppings were removed from the lofts, droppings that would otherwise have contributed to the soiling of buildings in the city.

Although it was the Swiss research that finally proved that killing pigeons as a method of control was a wasted effort, it seems to be Germany, not Switzerland, that is leading the way by introducing holistic and non-lethal pigeon control programmes in their towns and cities. The German city of Augsburg voted to improve and expand its humane pigeon control programme by the creation of pigeon lofts in converted roof voids in buildings within the city. In just one year, ending June 2003, the City Council removed 12,000 eggs from 7 pigeon lofts in converted roof voids. The City Council also closed down and excluded pigeons from 6 of the 7 derelict building sites within the city limits, thereby moving flocks into less sensitive areas of the city where their numbers could be controlled by egg removal. This staggering achievement was carried out without the use lethal control. The German cities of Nurnberg, Munich and Hamburg are now considering this type of non-lethal programme to reduce the size of their burgeoning pigeon flocks. Interestingly, the Ford Motor Company's car plant in Cologne also decided to implement a humane and non-lethal pigeon control programme in an attempt to reduce pigeon numbers in sensitive areas of the site. The plant manager confirmed that the company had spent vast sums of money on conventional pigeon control via pest control companies but these controls had failed to resolve their problems. The plant has set up the control system with the help of

volunteer groups in the area who service the lofts on behalf of Ford. Sadly this type of lateral thinking is not mirrored in the UK where the Ford plant at Southampton recently shot over 400 pigeons on the advice of their pest control contractor.

### **Case Study 1: Barking and Dagenham Borough Council**

In 1999 PiCAS was invited to meet with Barking and Dagenham Borough Council in North London to discuss alternatives to lethal control. The Borough had used culling as a method of control in the past but due to public pressure had decided to put culling aside and investigate more humane and effective methods of pigeon control. PiCAS, together with council officers, carried out a survey of the key areas and it was clear that the growth of pigeon numbers in the Borough was due to extensive public feeding and lack of proofing on local council owned properties. Much of the feeding was taking place in Barking Park, a public recreation area owned by the council where numbers of pigeons were rising steadily due to excessive public feeding. Local householders with properties adjacent to the park were complaining of pigeons perching on their roofs with resultant soiling problems. Several large high-rise residential properties owned by the council, only minutes away from the park, were providing these same pigeons with excellent overnight roosting and nesting facilities on balconies and window ledges. PiCAS provided a report to Barking and Dagenham Council recommending a control programme that would permanently reduce pigeon numbers in the Borough and solve the problems experienced by householders adjacent to Barking Park and tenants in the council owned high-rise flats. Recommendations included:

- The implementation of an extensive public education campaign explaining to residents the link between feeding and pigeon occupancy, with the inevitable resultant soiling problems, and asking residents to reduce food to the birds. Posters, notices, leaflets and media involvement to be used to get the message across.
- Extensive proofing works to be carried out on the high-rise flats in an effort to move the birds away from public access areas and reduce the incidence of fouling.
- A large artificial dovecote to be erected in Barking Park where pigeons would be encouraged to roost and nest and then any eggs laid would be removed on a regular basis. A designated feeding area would be provided at the base of the cote as a facility for those wishing to feed the birds. The council would then remove any excess food provided for the birds each day.
- Further artificial nesting sites to be considered on the high-rise flats and elsewhere in the Borough.

Barking and Dagenham Council immediately produced a colour leaflet outlining the problems associated with pigeon occupancy and asking the public to reduce food to pigeons in the area – unfortunately the leaflet was never distributed. The authority also carried out some minor proofing works on their residential properties in an attempt to reduce breeding opportunities for pigeons but clearly did not pigeon-proof all properties, resulting in little or no reduction of nuisance for residents.

In July 2000 the authority opened their new dovecote/artificial breeding facility in Barking Park in a blaze of very positive publicity. This positive publicity was marred by the authority's failure to carry out any of the other works recommended by PiCAS, completely missing the whole point of the dovecote programme. The authority made the classic error of judgement by picking from a menu of options rather than implementing all of the control options as recommended by PiCAS. Even though the authority installed a dovecote, as recommended, they failed to liaise with PiCAS over the design of the dovecote and subsequently ended up with a facility that was far from ideal, certainly as far as pigeons were concerned. The authority even erected the dovecote in the wrong place – another example of the authority failing to liaise with PiCAS.

The scheme in Barking and Dagenham should have been a breakthrough in the way Local Authorities in the UK control pigeons, but a number of key recommendations, made by PiCAS were never implemented and this resulted in the scheme failing. Firstly, the cote provided by the council was not built in consultation with PiCAS and although pleasing to the eye, is not an ideal design to attract feral pigeons. The designated feeding area and signage were not provided nor was the roof of an adjacent building netted as recommended. The authority did not liaise with PiCAS where producing public education literature was concerned and the recommended signage was never erected in Barking Park. This demonstrates that it is not enough simply to erect a dovecote and do nothing else. It is vital to implement all of the recommendations provided in order to offer an effective area-wide pigeon control system.

Incredibly, in 2002 the council tried to place blame PiCAS for the failure of the scheme, but as a result of petitions made to Robin Payne (General Manager of Community and Environment for Barking and Dagenham Borough Council) the authority eventually conceded that it had been a failure on the part of the council and not PiCAS. It should be noted, however, that Robin Payne said, of the dovecote: "Even if the cote is never used by pigeons it has certainly justified the expense as a result of all the positive publicity we have received".

### **Case Study 2: Nottingham City Hospital**

Unlike Barking and Dagenham Borough Council, Nottingham City Hospital implemented all of the recommendations made by PiCAS for an effective control mechanism and the results have been dramatic. PiCAS was invited to meet with Environmental Services Manager, Clive Young of Nottingham City Hospital, in May 2000 to offer advice on an effective pigeon control strategy for the extensive hospital site. Prior to involving PiCAS the hospital had embarked on a culling operation to reduce the estimated 1200 pigeons resident on site. This culling operation was suspended immediately as a result of feedback from staff on the site. PiCAS surveyed the site with staff from the Environmental Services Division and made a number of recommendations. The following statement, made by Nottingham City Hospital in March 2001, sums up the effectiveness of the scheme:

#### **ENVIRONMENTAL SERVICES DEPARTMENT PIGEON CONTROL UPDATE**

Since contact has been made with PiCAS and a visit made by Guy Merchant (Director of PiCAS), several new schemes have been in progress. Firstly, lethal culling has been suspended indefinitely. We have now employed an on-site Pest Controller, Mr. Martyn Belcher to control the pigeon population.

Having taken advice from PiCAS, and from the catalogues recommended, Martyn has pigeon proofed many areas, at a greatly reduced cost, as opposed to using private contractors.

Martyn has developed the concept of pigeon coups by using old staff single lockers turned on their side and compartmentalised them into nest boxes. The sites chosen are large bird populated flat roofs on 3 buildings in the Trust. Martyn leaves food, water and nest materials to encourage the birds to nest, then removes the eggs. He has also mapped out the nest sites on the Trust and visits these areas daily to collect eggs. Obviously if eggs are hatched young are left alone to fledge.

The impact on the Trust has been dramatic. In less than a year, the bird population has reduced by an estimated 50%. The cost of cleaning fouling has also reduced significantly.

Future plans include the roll-out of more coup areas, which have no cost or maintenance as we are recycling old lockers. We are, however, having a wooden coup made by our Estates Department, which will be near our wildlife corridor. Here again, the eggs will be collected.

This approach is both user friendly and non-lethal. We will continue to develop our strategy and monitor the effectiveness of the scheme. A further report will be sent to PiCAS in the Autumn.

**Clive Young**

**Environmental Services Manager**

As a result of their forward thinking approach to pigeon control, Nottingham City Hospital has recently been awarded the RSPCA Best Practices Award for adopting a strategy based on PiCAS recommendations.

**Summary**

There is no doubt that schemes focusing on public education along with complementary control options such as artificial nesting sites are the way forward for town and city-wide pigeon control. Local authorities in the UK would be advised to follow the lead of Kortrijk Council in Belgium, where the decision to fully implement the PiCAS recommended controls was instant and comprehensive following a visit from Director of PiCAS, Guy Merchant, in 2003. It must be understood, however, that for a town or city-wide control system of this nature to be effective, it must be comprehensive. To continue practicing lethal control in the face of such overwhelming evidence that it is totally ineffective is absurd. Pest Control companies, however, will continue to promote lethal control of pigeons because it is in their best interests to do so. Most local authority Environmental Health professionals agree that lethal control is ineffective but until now there has not been a humane, efficient and proven alternative available.

The problem of overpopulation of pigeons in our towns and cities will not go away and must be tackled at source rather than putting short-term lethal control procedures in place. It is essential that the public are persuaded, through public education campaigns, that reducing the food supply to pigeons will not result in large numbers of birds starving to death, but will mean that numbers will naturally reduce within the flock. Easily accessible artificial nesting sites need to be erected adjacent to areas where people can legitimately feed pigeons. By providing designated feeding areas and encouraging the public to use them, a local authority will be able to remove any excess food and control 'over-feeding'. This will also have the effect of keeping all the pigeons in one area. Artificial nesting sites are extremely inexpensive to produce, install and maintain and can be sited on or near existing roosting places e.g. the roofs of buildings where they will be out of sight of the general public. Alternatively, an ornamental dovecote can be made to be a pleasant feature in a public area and not only reduce flock size through egg removal but also provide a focus for a local authority-based pigeon control strategy. These measures alone will solve many of the problems normally associated with pigeons.

Many local authorities feel they need to be "seen to be doing something" irrespective of whether this action is effective or not. This is not enough. There has to be a real desire and commitment to make a scheme work and public education is the key. Now that scientific evidence exists which proves that killing pigeons is not a viable option, other methods must be considered, however radical they may seem. By combining an effective public education campaign with a scheme involving artificial nesting sites and deterrents, any town or city pigeon population can be effectively reduced and controlled. This combination of measures represents a simple, cost effective and humane approach to the control of pigeons in our towns and cities and most importantly, an approach that actually works.

**For practical help and advice on deterrents and humane, effective alternatives to lethal control please contact PiCAS.**

*Acknowledgements :*

*\* Regulation of the street pigeon in Basel by Daniel Haag-Wackernagel, 1992*

## **Artificial Breeding Facilities**

The provision of pigeon lofts and other types of artificial breeding facilities are becoming a more common sight in European towns and cities. Pigeon lofts and nest boxes can be provided on buildings where pigeon-related problems are being experienced. Dovecotes are normally provided in public areas, where the feeding of pigeons is already taking place, and in tandem with a designated feeding area.

**Nest boxes and lofts**

Pigeon nest boxes or lofts that are to be used as part of a control operation can be as basic or as ornamental as the site requires. A pigeon will nest in almost any receptacle that offers even partial protection from the elements. The birds will use a basic open fronted box made of plywood just as readily as an ornate box pictured on the accompanying sheet. The size of the box or loft is limited only to the size of the site available. In many respects a pigeon loft (approx. the size of a garden shed) will be the best option as this will accommodate more birds and can be more easily visited and cleaned. The more birds using the loft to roost will mean that there will be correspondingly fewer droppings on the buildings in adjacent areas.

Nest boxes can be sited in a variety of different places but ideally should be sited near to or on existing nesting or perching/roosting sites. Prime sites would be on the roof areas of buildings where there is easy access. Boxes should be sited off the ground wherever possible and the optimum height would be approx. 5 feet above ground bearing in mind that access to all parts of the box will be required for egg collection and cleaning. A tray with gravel or sand in it can be placed below a wall-mounted box to collect droppings and then this can be easily cleaned.

Boxes and lofts can be finished with a weatherproof non-toxic preservative that will blend in with any surrounding. There are a wide variety of colours available and these will ensure that the boxes are almost invisible to the naked eye at ground level. Designs can be altered to suit the requirements of the site.

Birds may need to be encouraged to use the boxes particularly if they are sited away from their feeding/roosting places. Offering food for a week or two can easily do this and, as pigeons are curious by nature it will not take them long to see the potential of the nesting site. No bedding or nesting materials need be provided to encourage the birds to start nesting. Further information on the provision of nest boxes and lofts can be found on the [Area-wide Controls](#) page.

#### Dovecotes

Artificial nesting sites for pigeons can be almost any shape or size and one of the most attractive is undoubtedly the dovecote. Dovecotes have been used to house pigeons for centuries and can vary dramatically in terms of their construction and the materials used to build them. Examples from the 17th, 18th and 19th centuries are not only intricate in terms of their architecture, but some are extremely large and in many cases are considerably larger than the average 4 bedroom house. The familiar white octagonal dovecote is a more common sight in the 21st century, built to house 6-8 pairs of birds and constructed from wood or ply.

For areas such as public parks, where pigeons are often fed regularly by the public, a dovecote is probably the most effective method of drawing birds to feed, roost and nest in one localised area and by so doing reducing random perching, nesting and fouling elsewhere. Scientific research has proved that if pigeons are drawn to an artificial breeding facility and can be encouraged to nest within it, **then by removing eggs as laid, the size of a flock of pigeons can be reduced by at least 50%** without causing any harm or distress to the birds. If a designated feeding area is provided adjacent to the cote, where the public can legitimately feed pigeons but where excess food can be easily removed, birds will be further encouraged to use the cote. The cote is an alternative to the nesting box or the loft and can be made to be an attractive feature of any town or city centre. A number of local authorities in the UK are now in the process of considering the provision of dovecote type facilities in public areas in an effort to reduce pigeon numbers humanely and effectively. Two large NHS hospitals in the UK (Nottingham and Cardiff) are also building impressive dovecotes in the hospital grounds in an attempt to draw pigeons away from roosting and nesting on hospital buildings.

The dovecote is the way forward for large scale pigeon control in the 21st century and if provided as a complimentary control option, alongside a hard hitting public information campaign designed to reduce general public feeding, pigeon numbers will reduce dramatically in any given area. The dovecote is a popular concept with the general public and not only relatively inexpensive to build and maintain but a method of control that will permanently reduce pigeon numbers.

PiCAS will provide detailed technical drawings, on request, to those that wish to build a facility of this nature. PiCAS will also recommend a company that will build and erect a dovecote of any size or dimension to PiCAS specifications.

Further information on dovecotes and artificial breeding facilities can be found on the [Area-wide Controls](#) page.

Title:	Wildlife Management of the Feral Pigeon <i>Columba livia</i>
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Commentaries:	

Feral pigeons are the descendants of the domesticated form of the wild living rock dove. During their long time of domestication hundreds of pigeon breeds were produced according to the desires and wishes of man. Domestication is distinguished by a high annual reproduction success, tameness and selection against too aggressive males. These features may partly be responsible for the enormous surviving success of the feral pigeon in our cities. Escaped dovecote pigeons and, from the beginning of this century lost racing pigeons founded the feral pigeon population of our cities.

A feral pigeon needs ca. 20g of food and water daily, a roost and a sheltered breeding site. Because of its adaptability it is able to make compromises on all structural needs, but not on food and water. Water supply is no problem, so the main ecological limiting factor is the food supply. Natural food and rubbish are scarce and could support only a very small population. Most of the food in Basel is spent by pigeon enthusiasts, who are responsible for the feral population, actually estimated at approx. 8,000 individuals. These people feed regularly at the same time, so the pigeons do not have to waste any time waiting and searching for food. This energy and time can be invested in rearing young. Because of the continuous availability of food, regulation of the numbers of pigeons by seasonal fluctuation and shortage of food in winter is eliminated. For the same reasons, the pigeons need no longer undertake the dangerous flights into the countryside, thus evading their hereditary enemies such as the Peregrine and the Goshawk.

Pigeon feeding is a friendly gesture deeply rooted in man. Pigeon feeders can by their motivation be classified in various groups. Play-feeders and display-feeders can be recognised. They are more easily to be dealt with than the fanatical pigeon-friends who show a strong emotional attachment to these birds. The pigeon problem, for that reason, is a sociocultural problem. In many cities an extensive food supply supports an overpopulation, which causes different problems, to man and to the feral pigeons themselves. Faecal droppings cause massive damage to buildings and monuments. House-owners try to protect the facades with different pigeon deterring systems, a measure which only displaces the problem to the next house, but does not solve it. If suitable breeding sites are closed e.g. with netting, you will get high population densities at suitable breeding sites. This overcrowding leads to poor hygienic nesting conditions causing diseases and parasitic infections in the nestlings and also to a high egg mortality due to territorial fighting of the parent animals. The parent animals themselves also suffer from diseases and parasites and social stress.

In response to pressure from house owners the city authorities in Basel decided in the 1970's to decimate the feral pigeon population by killing. As observed in other cities, these measures had no lasting effect on the population size because

vacancies left by the removed individuals are quickly filled by juvenile birds due to the high natality of the pigeon. In 1980 an attempt at population reduction using the "pigeon pill" failed.

The results of our investigation on the feral pigeon in Basel demonstrated, that a reduction of the population could only be effected by reducing the food supply as the factor, which determines mainly the ecological capacity. In 1988 the "Pigeon Action" of Basel was founded as an interdisciplinary project of the University of Basel, the government and the Society for the Protection of Animals of Basel. By means of large information campaigns we tried to influence pigeon enthusiasts to stop or to limit their feeding. Our intention was to reverse attitudes toward pigeon feeding, convincing the public, that ultimately feeding harms the pigeons and is counterproductive. We drastically demonstrated the negative effects of feeding e.g. by pamphlets and posters showing shocking pictures of baby pigeons infected by diseases and parasites. We tried to explain the complicated relationship between feeding and overcrowding and the density-dependent causes of the poor living conditions. Our answer to the argument, that the feral pigeons would starve with the decline of food, was the elimination of pigeons by the Game-inspectors of Basel, which regularly removed birds (less than 20% of the population per year) to adapt the population to the reduced food supply initiated by the public restriction of feeding.

In 1988-1991 in official buildings we built supervised pigeon lofts to house a small but healthy population as an alternative for the pigeon friends. In 1996 we removed 1,656 kg faeces and 2,596 eggs from our 8 lofts, where about 500 feral pigeon are housed. These lofts demonstrate our intention not to exterminate the pigeons but to develop a small but healthy pigeon stock. After the start of our campaign, part of the food had vanished by limitation of its source or by the loss of the feeder. Dead individuals seemed no longer to be replaced by young because intensified competition for food allowed few of the inexperienced animals to feed successfully. We also suppose, that the food shortage led to a decline in breeding success, resulting in a smaller juvenile population to replace losses. The population size of 13 weekly counted control flocks decreased from 1988 to 1992 to about half indicating a total population reduction from about 20,000 pigeon to 10,000 within 50 months. With the decrease in population size, damage caused by the pigeons was reduced accordingly. Our evaluation of news articles, letters to newspapers, and calls to the Society for the Protection of Animals showed that people widely understood our message that feeding is a noxious act against the welfare of pigeons. Our method worked in part directly on the pigeon feeders with the result that they fed less or stopped feeding altogether. This method of our pigeon population regulation can be adapted for use in other cities. Yet for each case, a careful scientific evaluation of the local situation is very important.

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Commentaries:	

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People start to kill or exterminate as many individuals of an animal species as possible once they feel disturbed or affected by them. This is often done in ignorance of the ecological context. Soiled buildings and monuments have always been a problem to owners and local authorities. At the beginning of the 20th century, reduction of large feral pigeon populations was attempted in Washington, London and Dresden by hunting and shooting (Haag-Wackernagel 1998). Munich was estimated to have a feral pigeon population of approximately 60 000 individuals in 1934. They were being fed by passers-by, in particular on Odeonsplatz and in front of the castle. At that time, the town planned to limit pigeon numbers by destroying their eggs. Feral pigeons had been regularly shot by the Basel police since 1927. Such measures provoked disputes with animal protection organisations; some of these arguments were described as a "pigeon war" (Schmidt 1973). After 1935, pigeons were caught in traps made of net or wire-mesh and were killed. At the same time, advertisements in newspapers tried to persuade pigeon fanciers to stop feeding pigeons. Animal killing seems to stimulate man's imagination about possible methods in innumerable ways. Many different means of poisoning by contact or eating were used to kill pigeons, as well as firing nets over flocks with rockets and using guns that fired pressed-salt pellets that do not damage buildings. Even an "electric chair" to kill pigeons was invented (Geisthart 1977): feral pigeons were attracted by food lying on a metal platform of four square meters and were killed instantaneously by a strong electric shock once they had stepped on the metal.

Today, control programmes that aim to reduce pigeon numbers attempt to eliminate as many individuals as possible by trapping, shooting or poisoning. But several scientific studies have demonstrated that killing like this fails to keep the number of birds low, because the place of the killed birds is filled within a short period of time by new juveniles, or by birds that immigrate from neighbouring areas. Because of the high rate of reproduction that pigeons can achieve – up to 12 fledglings per year per pair – a lasting control of our feral pigeon populations cannot be achieved by killing.

Number-regulating measures like "the pill" for pigeons are very controversial. Chemosterilants, which mostly are extremely poisonous, cause either temporary or permanent infertility. These substances must under no circumstances be introduced into urban ecosystems because there is no guarantee of safety for people or other urban animals (Haag-Wackernagel 2002). Treatments of pigeons with hormones, which were undertaken in several towns, had no lasting success. However, a new kind of pill with hormones similar to those used for humans proved effective under laboratory conditions (Kummerfeld et al. 1996); until field experiments have demonstrated that a permanent reduction in numbers can be achieved, this material should not be used in towns. With this kind of control a major difficulty arises from the difficulty in administering exact doses of a substance to wild animals. But precise administration of biologically active substances like hormones or chemosterilants is essential for this kind of population control. In pigeons and other animals, dominant individuals chase the weaker ones from a food source, so that strong adults eat too much of the administered substance and subordinate individuals eat too little. Unfortunately for the dominant birds, unavoidable overdoses would be the result, and the effect would mostly be poisoning. Instead of selecting weak animals, unwanted selection of the strongest individuals would occur, which is exactly the opposite of the aimed result.

The ability of animal populations to compensate for additional mortality imposed by man is a powerful defence against almost any human attempt to reduce animal populations successfully by either decreasing the birth-rate or by increasing mortality (Kautz and Malecki 1990). According to this ecological fact, a high mortality-rate among adult animals – e.g. as a result of hunting – improves the chances of juveniles surviving to adulthood. The reasons are easy to explain. If numerous adults die, the young will consequently find more food and space for living. The young would simply take their place and „inherit“ ecological gaps, without having to find new territories or undertake risky emigration any more. Paradoxically, decimation usually restocks a population instead of decimating it. The same is true for species like pigeons with their high fertility-rates. Their enormous capacity for reproduction can compensate for even great losses within a short period of time.

***Killing feral pigeons only restocks them. The gaps created are immediately filled by immigrating pigeons and juveniles.***

### **Pigeons on the Balcony?**

Roofs and façades are, as already mentioned, the pigeons' favorite urban structures since they resemble the rocky coasts that used to be their original habitat. Our buildings offer perfect breeding, sleeping and roosting sites to them as well as lookouts for spotting their fanciers who will bring them food. The easiest way for us is to simply tolerate pigeons and enjoy watching them. If a pigeon pair happens to settle down on your balcony to breed, you will get the fascinating opportunity of closely observing nesting and hatching among pigeons. In urban environments, nature is usually only experienced indirectly through television and does not convey the biological reality. A pair of pigeons on a balcony presents an opportunity to observe the real life of our urban animals since it seldom occurs in places that we can so readily see. Children in particular can take advantage of regularly observing the breeding behaviour of feral pigeons as part of their studies. Why not document that important sequence of life in a diary with drawings, descriptions and pictures during five weeks or more?

As soon as the male pigeon finds a suitable location for nesting, he starts to woo a hen intensively in order to gain her for mating. Once mated, the cock drives the hen towards the nesting place, away from other pigeons. He marches after her in a very upright posture, taking long steps and picking at her so as to lead her directly to the nest site. When nest-making has started the cock searches for building material, leaving it at the nesting site. In building the nest, the pair at first works in complete accord and sympathy, their interest is mutual and of the same degree. Shortly before oviposition only the cock leaves the nest to search for more material, while the hen begins the construction, using all the collected dry fibres, twigs and feathers to build the nest, often on a bed of guano left after a former nesting attempt. Mating among pigeons lasts approximately ten days, starting with the wooing. In mating, the birds' "kiss" reminds us of human ritualized food exchange from mouth to mouth. During the mating ceremony the pair is often disturbed aggressively by other pigeons. This "sex jealousy" cannot be explained yet, but it has also been observed with many other species. After copulation the hen struts around proudly in a very upright posture while the cock rushes up by clapping his wings loudly and flies off, apparently wanting to impress everybody. Everywhere the female goes she is followed by her mate. Eight to ten days later, a clutch of two eggs is laid, the second egg 24 hours after the first. The eggs are oval, white and weigh approximately 17 g each. After the first egg has been laid, both partners alternate in standing beside it, but do not start incubating until the second egg is laid. The cock sits on the eggs in the morning until the early afternoon, while the hen incubates them for the rest of the time. After 17 days of incubation the eggs hatch. The squabs at hatching are blind, downy and nidicolous.

Both parents feed them with pigeon "milk" in which they soak more and more seeds every day. At first, it is the parents who impose food upon the chicks, while later the squabs beg for it themselves by calling their parents with loud cheeping and by clapping their wings. The age of a nestling can be estimated according to its plumage and body size. The young chick is covered with yellowish down feathers on its first day of life; by the third day, it has doubled its body length! On the 7th day, the plumage forms two dark rows along its back. On the 14th day, the remiges emerge from their waxy sheaths, and from the 18th day on, feathers gradually cover the wings and the back region. On the 21st day, the squab is covered all over with feathers, but the tail is still missing. Feathering is completed on the 28th day when body weight has reached its maximum. The young pigeons are then ready for the first flight, which is attended by the male pigeon.

### **What if Pigeons Settle down at Your House?**

When numerous pigeons habitually congregate on buildings, measures are usually taken against them once their excrement starts to deface the surroundings to an unbearable extent. There are different reasons why pigeons roost on buildings. If they are fed, they come close to the source of food, waiting there for their fanciers or an opportunity to eat. In such cases, it is advisable to talk to the fancier, i.e. the feeder, who caused the problem. Public feeders might be persuaded to feed pigeons in parks instead. Pigeon droppings would then be deposited on trees rather than on façades. If pigeons use a building only for roosting, you can attempt to spoil the quality of the place by making noise repeatedly. Pigeons are highly sensitive to bangs, and they will leave the place for good if they are persistently disturbed by clapping of hands. Complete freedom from pigeons can be achieved by blocking openings by means of nets or wirescreens, or by installing ledges not wider than 6 cm or at a 60-degree angle to present a slope on which the bird cannot roost (Haag-Wackernagel 1997b), or by installing specially made spike systems on the ledges. Net or wirescreen, and spikes, must be fitted properly to prevent pigeons or other animals from perching, and also from getting trapped.

If pigeons use buildings for nesting, however, it will be much more difficult to solve the problem because pigeons stick to their breeding site persistently. Even if intentionally disturbed, they are difficult to chase away. Furthermore, it is no use taking away their eggs since they will replace them immediately by new ones. However, if one egg is taken and the other left, but rendered infertile by pricking it or coating it with light oil, the pigeon pair will go on incubating the destroyed eggs for a while.

### **Animal Protection and Pigeon Detering Systems**

Feral pigeons have become a problem in almost all larger towns. Laws for animal protection claim the following: "Nobody is allowed to hurt, torture, frighten or do harm to any animal without justification." The same is expected from pigeon deterring systems, but unfortunately, law is sometimes violated. We analyzed the most common pigeon excluding systems that have been used in recent years (Haag-Wackernagel 1997b, 2000b, 2000c) and stated that there are basically two systems: deterring systems by contact and those by distance. The latter try to keep pigeons off permanently from a specific area by sending visual, acoustic, magnetic or olfactory impulses. Those defense systems (ultrasonic sound, magnetic pulses, olfactory repellent, all kinds of scarecrows) that physically keep pigeons at a distance are inefficient in the long run, according to our as well as other scientists' studies (Woronecki 1988, Griffiths 1988, Bomford & O'Brien 1990). On the other hand, systems that keep pigeons away by contact are generally more reliable.

## **Pin and Wire Systems**

The figure above shows the most common mechanical antipercing devices for the exclusion of pigeons. Sharp endings of needle and claw systems from the USA (fig. a. and b.) intend to inflict pain on pigeons. They are dangerous and can also be very injuring for the person who installs and subsequently maintains them. Plastic spikes (fig. c.) or clear bird spikes like the ones shown in figure e. are at the same time efficient and harmless. Also, wire systems can be recommended (fig. f.) or even systems that prevent pigeons from creeping beneath the obstacle (fig. g.).

Systems that, according to adjustment, cause stronger or weaker electric shocks to pigeons by contact only are acceptable if they use a low level of power under 0.5 joule. Extremely strong electric shocking equipments like the ones produced by some German companies are unnecessary and imply cruelty to animals so as to violate the laws for animal protection. They are banned from use in the European Union under the Conservation of Birds Directive (Council Directive 79/409/EEC). Contact repellents like the ones formerly used in several European countries, which trap pigeons using gels or sticky pastes that spoil their feathers, and which put smaller birds into danger as well, are not allowed for animal protection reasons (Wormuth & Lagoni 1985). According to our experience, pigeons are able to overcome any repellent system if they are obstinate enough, no matter what kind of pigeon deterrent system is applied or how intense the repellent stimulus is (disturbance of balance, obstacles, painful stimuli inflicted by spikes or electric shocks). No repellent system we tested can keep a pigeon away if it wants to reach its squabs in the nest; motivation is simply too strong. In this kind of situation, pigeons are ready to accept any handicaps, even the worst. "Brutalising" the repellent system is therefore no means of better protection at all in comparison to harmless solutions, since the motivation of the bird is of over-riding importance in determining what the bird will tolerate. Consequently, no brutal deterring systems should be used in the future because they are no more effective than deterrents that do not inflict pain.

### **The "Pigeon Action of Basel"**

#### ***The "Pigeon Action of Basel" is based on information and education instead of prohibition.***

All experiences up to now lead to the conclusion that reduction of pigeon populations can only be achieved by reducing their food supply. In order to guarantee a permanent human solution to the problem, the "Basel Pigeon Action" was initiated. 1988, the Basel animal protection organisation "Tierschutz beider Basel" started and led the action, in cooperation with the University of Basel and the Health Department of Basel (Haag-Wackernagel 1993, 1994, 1995). From the ecological point of view, food supply provided by man is responsible for the maintenance of excessively large feral pigeon populations. Therefore, the public, especially the fanciers among them, were the target of our efforts, instead of the pigeon populations themselves.

Brochures, posters, articles in newspapers and programmes on TV and radio were used to explain to the public what the negative consequences of feeding feral pigeons would be, no matter how well-meant the courtesy is. Bad living conditions of the pigeons caused by public feeding were presented with shocking pictures. The media campaign tried to make the public aware of the consequences of uncontrolled public feeding, demonstrating that it is the large food supply that is responsible for large feral pigeon populations. Over-population, as a result, causes "slum living conditions" for the crowded pigeons, encouraging parasites and diseases. Additionally, those poor living conditions can indirectly lead to hygienic problems which threaten humans and their pets. Pigeon fanciers were therefore asked to stop feeding pigeons, or at least do it within severe limits, for the benefit of the pigeons themselves. **In order to avoid starving the pigeons because of the limited food supply during the action, as many pigeons as possible were caught by officials of the game inspectorate of Basel. A cage trap was used for that purpose. Amid toughening competition the pigeons adapt faster to the new living conditions. The yearly catching of the pigeons is limited to 20% of a population.** This measure alone is probably not enough to control the number.

In order to demonstrate exemplary animal keeping of the town, the government of Basel had eight dovecotes built for feral pigeons under the roofs of publically-owned buildings. The dovecotes are cleaned and surveyed by a keeper once a week. So, if a flock grows too fast, fertilized eggs are removed from the nests and replaced by infertile ones. From 1991 to 1996, 8100 kg of faeces and 10 749 eggs were removed from the dovecotes. Public authorities finance the dovecotes in order to show that the town does not intend to exterminate the pigeons but, on the contrary, wants to keep a small, but healthy, pigeon population. Moreover, they want to demonstrate that it is not enough to simply feed the pigeons, leaving responsibility to everybody else. Good animal keeping implies much more than throwing food to the pigeons, it also implies provision and maintenance of dovecotes and the availability of veterinary assistance.

The average size of 13 controlled flocks decreased from 1400 to 708 individuals within 50 months. The results allow conclusions that can be drawn for the entire feral pigeon population. The population of approx. 20 000 pigeons was considered to have been reduced to 10 000 individuals within the 50 months. Accordingly, there was a decrease in the amount of damage during that period. The gardening authorities of Basel stated that there had been a reduction of damage of approx. 50% in public green areas. Changes in the public attitude towards public pigeon feeding was evaluated by exploring the socio-cultural success. The results drawn from analysis of articles in the press, letters from readers in newspapers, telephone calls and ordinary letters proved that the message saying that public feeding does harm to the pigeons had been understood. There were national as well as international positive responses to the Basel Pigeon Action. Today, most people in Basel are aware that uncontrolled public feeding is harmful to the pigeons. According to our experience, a population of wild animals can only be influenced after careful analysis of the ecological context. Because of the enormous reproduction rate of the pigeons, killing

attempts without any simultaneous food reduction do not have any influence on the number of birds in the population. They only treat the symptoms, not the cause and are therefore in vain.

# The Pigeon Action of Basel

Information and public education



Decreased feeding activity:

- more competition
- less breeding success



**Tierschutz ist:**

**Tauben  
nicht  
füttern!**



Controlled dovecotes:  
1200 kg pigeon excrement  
per year  
Elimination of 2000 eggs

Trapping:  
Adaptation of the size of the  
population to the reduced  
food supply

Decrease of the population

## The Future of the Feral Pigeon

***A successful feral pigeon is clever, tame and cautious at the same time, has a modest food supply and is considerably resistant to diseases and parasites.***

Feral pigeons are loved by the ones who kindly feed them, and hated by others who chase and torture them. It makes our symbol of the holy spirit and peace become denigrated to a flying rat or flying rubbish. Some people are not able to see that our pigeon problem is an ecological consequence of misguided human behaviour, they blame the pigeons themselves instead. In Basel, pigeons are found again and again that have been poisoned or shot and these birds usually die after a long agony. Fit feral pigeons are clever, tame and cautious at the same time and they are modest and considerably resistant to diseases and parasites. The male pigeon must be a good fighter if it wants to conquer one of the rare breeding sites and it must succeed in competition for food. The female pigeon must help raise the nestlings together with its partner. If one partner dies, breeding fails. After fledging, the young are usually further assisted by their father. He takes them with him to his feeding places, which widens their chances of survival. Like any other creatures, pigeons are only interested in one thing: survive as long as possible and generate as many fit offspring as possible. That is how a species optimizes conditions for spreading its own genes. Considering this natural instinct, it is obvious that a pigeon population coming under pressure because of killing actions by man will adapt even faster to the new selective process for survival. We can expect that feral pigeons will go on adapting to the living conditions of city life, so that also in the future, these lovely wild birds will hopefully stay with us in our towns.