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# URBAN BLACKBIRD ROOST SURVEY—1981

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**ABSTRACT:** A brief description is given of 29 areas in the United States and Canada experiencing problems with blackbirds and/or starlings. The answers to an Urban Blackbird Roost Survey of these areas are tabulated and discussed. Suggestions for future urban roost management are presented.

## INTRODUCTION

With the increasing human population and its effects upon the environment, there is a growing need to develop effective methods for pest-bird control in urban areas. The pigeon (*Columba livia*) and English sparrow (*Passer domesticus*) have long been associated with cities. However, it appears that another group of birds has joined the pigeon and sparrow in creating problems in urban North America. This group contains several species of blackbirds (Icteridae) and the European starling (*Sturnis vulgaris*). Except for the breeding and nesting season when these birds maintain a territory and are not associating with others of their kind, they roost together in flocks ranging in size from 1,500 (Pearson 1967) to 7-8 million (U.S. Dept. of Army 1975). When such a blackbird roost becomes established in an urban area, the rapid build-up of feces necessitates prompt attempts at dispersal.

There is a need for effective and acceptable methods for dealing with urban blackbird roosts. This was demonstrated recently when a brochure describing roost dispersal was briefly mentioned in an internationally circulated newsletter to city managers (International City Management Newsletter 1981). Within a month there were approximately 100 requests received for this brochure (Erdman 1981). Although some of the requests were for informational purposes or for pigeon control, most of the requests were from municipalities which were or had been embroiled in an ongoing struggle with their local blackbird roost problems.

This report presents the results of an Urban Blackbird Roost Survey conducted in 1981.

## METHODS

Fifty-one people requesting the brochure were contacted by telephone, briefly interviewed, and told about the proposed survey which they agreed to complete and return. The Urban Blackbird Roost Survey 1981 sought information in 3 areas: 1) the physical description of the roost; 2) methods used for dispersal; and 3) suggestions as to what each respondent felt was needed to improve his local roost-control efforts. Most of the questions required single, short answers. Unfortunately, too many of the questions allowed longer, more involved responses. The results from this survey, therefore, have too many variables to allow a statistical analysis. The results of the survey provide descriptions of current urban blackbird roost problems across the United States and Canada. Thirty-one surveys were returned of which 1 was blank, 1 was duplicate information (county government and county seat) and 29 were considered valid cases.

## RESULTS

### Locations Involved

Twenty-nine cities (Fig. 1) responded to this survey. The human population of the survey cities ranged from 2,972 to 309,123 inhabitants (Table 1). Urban bird roosts are a problem for small and large cities. The two largest cities experience localized problems where blackbirds are more likely to roost on structures such as buildings, power lines, etc., than in trees.

The total population of the 29 cities is over 1.25 million people. This number is very conservative. There are many other localities with similar problems but they did not take part in this survey. In other words, bird-man conflicts are indeed widespread and involve millions of people living in urban North America.

### Roost Activity in Years

Approximately 70% of the survey cities have been involved for 4 or more years with urban roost problems. Apparently their continuing problem has not been handled effectively.

The numbers of years the survey cities have been involved in urban blackbird roost dispersal efforts are presented in Table 2.

### Species Composition of Roosts

Starlings were the predominant species of birds in the roosts (Table 3). There might be some cause to doubt the responses of some of the above since it is sometimes difficult to identify the birds making up a large, mixed-species roost. There was no question posed in the survey to check the local expertise of those individuals identifying the problem birds.



Fig. 1. Twenty-nine cities responding to the 1981 Urban Blackbird Roost Survey.

Table 1. Human population size of 29 responding cities in urban bird roost survey 1981.

Nos. in Populations	Nos. of Cities
< 10,000	10
10 - 20,000	8
33 - 92,000	9
309,173	1
276,554	1

Table 2. Numbers of years the 29 responding cities had bird roost problems as reported in the urban bird roost survey 1981.

Roost Time in Years	Nos. of Cities	% of Cities
<1	1	3
1	5	17
2	1	3
3	2	7
4	5	17
≥ 5	15	52

#### Specific Roost Locations

Trees were mentioned as roost sites in 27 of the survey cities. Nine cities had roosting problems on buildings and one had roosting birds on sign structures. Roosts in cane stands were reported by three cities. Other bird problem areas such as escarpments, electric and telephone wires, and open fields were noted but are more likely to be feeding and/or staging areas.

Table 3. Bird roost species in 29 cities in urban bird roost survey 1981.

Species	Nos. of Cities	% of Cities
Starling	23	79
Common grackle	9	31
Red-winged blackbird	5	17
Cowbird	3	10
Long-tailed grackle	2	7
Others (crows, etc.)	4	14

#### Roost Trees

In 21 cases, 13 roosts were located in deciduous trees, while 8 were in evergreen trees. No particular species of tree was favored. The various maples, elms and oaks were used approximately in equal numbers. One might expect this since urban areas are most likely to use these species as shade or street trees. This agrees favorably with the findings of Bliese (1953).

Of the 28 areas reporting on roost tree height, 15 had roosts located in trees 40-60 feet high, while 13 roosts were located in trees 20-40 feet high. Lyon (1981) reports that of 25 roost sites studied in central New Jersey, the majority of these fall within the above range of 20 to 60 feet.

#### Roost Area

Roost areas were reported to range from 0.5 to 60 city blocks; the average was 11.5 blocks. Other cities reported their roost areas in acreage which ranged from 0.25 A to 100 A, the average being 17.44 A/roost. This indicates that some roosts are localized and others encompass major land areas. One city reported that roosts were "all over town."

#### Roost Severity

Twenty-four of the cities consider urban roosts a nuisance. Fifteen were aware of the potential health hazards involved, whereas only four reported the roosts constituted a definite health hazard. Two respondents were concerned about property loss, nine cited aesthetic reasons, one mentioned property devaluation and one cited urban roosts as a safety hazard.

#### Roost Attractants

Those survey questions dealing with the presence or absence of various attractants to large numbers of birds such as feed lots, mills, landfills, agricultural lands, and bodies of water did not appear to be significant for these survey cities. The birds did not home in on their urban roost because of any of the above attractants. One hypothesis I wished to test was the presence of tall, vertical structures in the vicinity of the urban roost, as well as broad roads or highways leading toward the roost. The answers from the cities do not indicate any connection between vertical or horizontal landmarks and the presence of roosts. It has been my observation in the major proportion of our local roosts in northcentral Texas that either one or both of these landmarks are nearby. It would be interesting to seek more information on this aspect of urban roosts.

#### Urban Blackbird Roost on an Annual Scale

Roosts may be a problem in every month of the year (Fig. 2). Eleven summer roosts (Fig. 3, broken lines) were reported in Texas, Illinois, Iowa, Michigan, North Carolina, Delaware, Missouri, Nebraska, Kansas, Virginia, Indiana, and Ontario, Canada. Seventeen winter roosts (Fig. 3, solid lines) were reported from Texas, Missouri, Tennessee, Oklahoma, Virginia, Iowa, Georgia, North Carolina and Ontario, Canada. According to the data in this survey, starlings and blackbirds shift to the east and south of their summer roosts to establish winter roosts.

#### Roost Dispersal Techniques

Various dispersal techniques were employed in the survey cities. Chemical sprays, loud noises, distress calls, pyrotechniques, tree-trimming, scarecrow devices, crop management, remodeling buildings, removing trees and clearing areas, shooting, fire hoses, poisoned popcorn and baiting other areas were tried. Ten cities had trimmed trees and found this a successful control method. Twelve cities have tried distress calls with nine judged successful. Seventeen had used loud noises but only ten of those reported positive results. Scarecrow devices did not work. One city reported shooting to kill and found this approach effective. Only about one-third of the cities having urban blackbird roost problems attempted any dispersal technique. The other two-thirds, it would appear, need assistance and information concerning the initiation and management of an effective urban bird-roost control program.

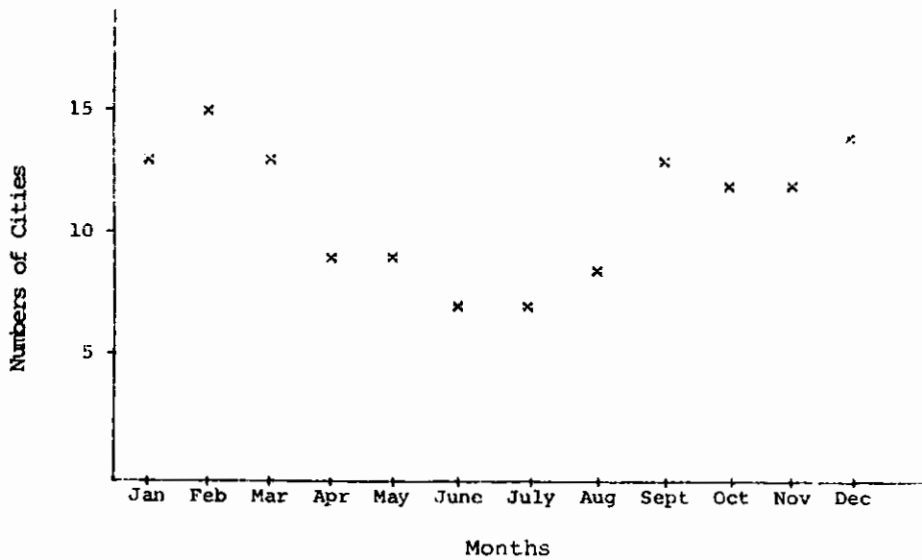


Fig. 2. The monthly presence of blackbird roosts in 29 cities as reported in the urban bird roost survey of 1981.

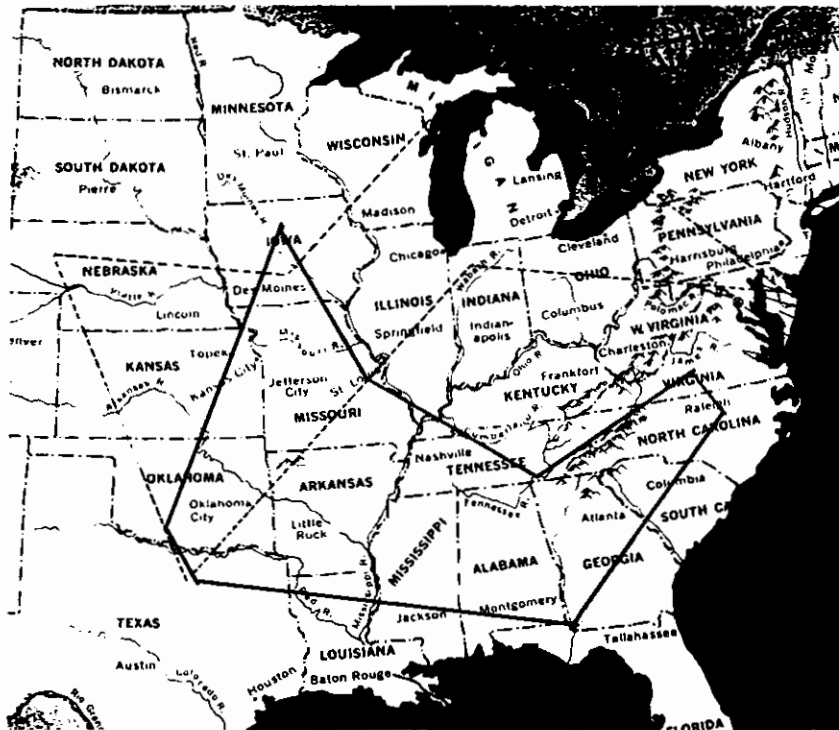


Fig. 3. Urban Blackbird Roost Survey 1981. Roost problem areas for summer (broken lines) and winter (solid lines).

### Responsibility for Roost Control

In 75% of the cities reporting, there was some department, group or individual cited to direct roost-management efforts. This is not the problem. The real problem in dealing with urban blackbird roost management is a lack of expertise. Three of 29 cities responded that they had a knowledgeable person or agency that would be helpful to them. Four judged this expertise as good, 8 as average, another 8 as poor, 5 as nonexistent and 1 reported they were still gathering information.

Assuming that the 7 localities reporting the excellent or good ratings have access to current methods for urban blackbird roost control, this suggests that the other 75% of those localities, which reported average to nonexistent expertise, need help.

## Needs and Requests for Help

Since the majority of cities felt that they had someone capable of directing roost-management efforts on their local front, the needs for specific factors were surveyed which would allow these people to set up and conduct their own programs.

<u>Needs</u>	<u>Responses</u>		<u>Unanswered</u>	<u>Percent of Responses</u>	
	Yes	No		Yes	No
Sources of dispersal equipment	14	3	12	82	18
Training	11	4	14	73	27
Public relations techniques	10	5	14	67	33
Manpower	9	7	13	56	44

The percent of responses to these specific needs indicate that the survey cities need: 1) sources from which to obtain dispersal equipment; 2) training; 3) public relations techniques; and, 4) manpower to conduct effective roost-management programs. The various areas of need support the desire to have and the utility of a newsletter specifically concerned with bird roost-management initiation and techniques. The realization of the problem exists; however, people do not understand how to cope with it in a successful way.

## Requests for Help

The list of diverse agencies that the survey cities contacted in seeking help emphasizes the need for some clearly recognized, central authority able to answer the call for assistance. These local agencies were contacted for help to control roosts:

<u>Agency</u>	<u>No. of Responses</u>
Health Department	19
Fish and Wildlife	14
Police Department	13
Extension Agent	10
Fire Department	7
Animal Control	5
Area Extension Specialist	3
Others: (1 response each)	
Dr. Monroe, U. of Louisville	Public works
Wildlife Specialist	Rescue squad
Department of Agriculture	Service Office
Department of Natural Resources	Building Maintenance

The help that was offered by the above agencies includes 17 offers of physical assistance; advice was offered in 13 cases. Additional comments were:

- 1) Technical advice was given on chemical uses.
- 2) Distress tapes were provided; noise and pyrotechniques were used.
- 3) State and federal wildlife extension service would work with them.
- 4) One county cleared 3 A. of land at the resident's request in 1978, then declared no more action would be taken unless health problems existed.
- 5) Another county limited its involvement to speaking to and advising groups of people on thinning trees and noisemaker use, but this was not an encouraging outlook.

## Legal Aspects of Roost Control

Before a community can initiate and conduct an effective roost-control program, it is essential that local, state and federal ordinances and laws will permit the necessary action. Questions in the survey were initially posed to point out to the respondents that all three levels of government might have limiting regulations hampering local efforts to work out their problems. Comments from the survey cities in regard to their legal restrictions barring action on bird roosts were:

- 1) There are local laws regarding methods and species of bird involved.
- 2) We have no local but some state laws.
- 3) There are no local laws but the city is a bird sanctuary, therefore nothing can be done anyhow.

- 4) We can act if we get a special permit.
- 5) The health department has regulations regarding exterminator actions.
- 6) The Humane Department and Poison Control have limiting regulations.
- 7) The city contends that a hazard to public health must exist before they or the county have the authority to act.
- 8) We have no laws affecting starlings.

The City of Denton, Texas, had two ordinances barring local efforts to cope with blackbird roosts. I submitted to the City Manager changes in these ordinances which would allow us to initiate a successful roost-control program. My discussions with the City Manager and the City Attorney resulted in the ordinances being rewritten to incorporate my suggested changes. The City Council unanimously passed these amended ordinances. One of the original ordinances prohibited the discharge of firearms within the corporate limits of the City of Denton. This was amended in 1981 to allow the discharge of firearms within the city upon the permission of the City Council. The other ordinance stated that it was unlawful to intentionally kill, injure, or administer poison to any bird whatsoever within the city limits. This second ordinance was also amended in 1981 by the addition of the same qualifying phrase "without the permission of the City Council."

#### Roost Control Newsletter

When asked if they would support a mutual exchange of methods, ideas and progress being made in the field of urban pest-bird management as well as contribute their own problems, attempts at solution, progress, etc., via a possible newsletter we might issue, 29 of the 30 cities surveyed answered yes. One city qualified its yes answer by adding, "...if it doesn't cost anything." Only one city replied negatively. Such a unanimity of opinion emphasizes the needs of urban areas beset with roosting problems. They wish to share in the search for successful management techniques.

#### Additional Comments

As a final item in the survey, I requested comments, questions or suggestions concerning training of personnel and sources of materials. Specific replies include:

- 1) We are interested in determining successful techniques used and the extent of others' problems. Bainbridge, Georgia.
- 2) Our city and county take the same position: If no health problem exists, there is no power to remove the roost. Rocky Mount, North Carolina.
- 3) We have more problems with pigeons and doves than with blackbirds. Alliance, Nebraska.
- 4) We need advice and knowledge in the area of patterns, habits and effects of blackbirds. Daugherty County, Georgia.
- 5) We cleared the roost area. The birds just relocated a short distance away. Noise and pyrotechniques were not effective. Use of chemicals and poison were ruled out because of the risk for real health problems. Is there some way, through feeding, to make birds sterile and reduce numbers that way? The only truly preventive measure is to get at the source. Albany, Georgia.
- 6) Annual problem for 6 years until last year when we topped and thinned the trees used for roosting. Dover, Delaware.
- 7) We could use training and grant programs. Athens, Tennessee.
- 8) Our problem is not sufficiently important to warrant additional help. Escanaba, Michigan.
- 9) When blackbird problems arose, it was the basic decision that this was the problem of the property owners. The city offered advice and some assistance, but little more. The state department of agriculture brought in starling distress calls and these were used on several occasions at dusk. There may have been some success; but I believe their natural spring habits had the greatest effect on moving the roost. Roanoke, Virginia.
- 10) We have a 15-year old control program. No roost problems that cannot be taken care of now. At first there were about 10 million birds in the downtown area; now we have very few birds that come in for short times in the fall and summer. We walk the streets and shoot them. Most complaints now are just small numbers that come in trees around residences. We do not allow them to stay very long. We have tested chemicals for label approval for EPA. We have been using our procedures for 15 years and have been successful with them and newer methods. Wichita, Kansas.
- 11) We need more information about the habits of starlings. Park Ridge, Illinois.

- 12) I have reason to believe that the methods we presently use may be effective if we can act before the birds become ensconced in the roost. O'Fallon, Missouri.
- 13) If something isn't done in the next few years, the grackles will wipe out a large percent of our song birds. I have watched them destroy robin nests and eat the baby robins or eggs. I believe everything has a right to live, but not if they destroy another life. Indianola, Iowa.

#### SUMMARY

The response from a wide area of the United States and Canada expressing interest for information on urban blackbird roost-control methods indicates there is a need for concerted effort to develop effective methods for bird-roost management. Also of importance is the need to distribute this information to those agencies to which communities turn for information, advice and support when such a problem as urban roosts emerges. The age-old concept of birds vs. man in an agrarian society has long been recognized. The jet age requires that we accept the potential hazards of large groups of birds in the vicinity of fast-moving aircraft. It is now time to recognize the needs of urban areas.

#### ACKNOWLEDGMENTS

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