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BIRDS IN HANGARS - A MESSY PROBLEM
by Albert E. Bivings, IV*

ABSTRACT

Pest birds in hangars and similar man-made structures pose specific health hazards as well as nuisance and corrosion problems. While lethal control or a scaring program may be the best technique for some locations, neither address the long-term problem of the basic attractiveness of these structures to birds. The best long-term solution usually is to exclude the birds with permanently installed plastic or nylon netting. Several methods to accomplish this are discussed.

INTRODUCTION

The advances of modern man must be tempered by the realization of the magnitude of our mistakes. Long before the Wright Brothers ever flew, settlers from Europe longed for the familiar birds of their homeland. After numerous attempts, they were finally successful in establishing resident populations of starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), and pigeons (rock doves) (*Columba livia*). They soon became abundant wherever man-made structures were available. When man decided that it was more fun to fix his flying machines out of the rain, he built hangars to house his airplanes. He soon learned of a different variety of indoor rain. As population of pest birds increased, he learned that nearly any man-made structure could attract these species. He also learned that due to both size and design, which produces an abundance of various sized perch sites, hangars are tremendously attractive to birds.

Specific health hazards are associated with the presence of birds in our hangars (Weber 1979). But the most serious problems are often those of morale and corrosion that come from the nightly rain of fecal material from roosting birds. The solution to the

problem is to keep the birds out. Unfortunately, this is not very easy to accomplish. It would be a small scale problem if aircraft systems always functioned flawlessly. Since airplanes do require maintenance, you have to open the hangar doors to move aircraft in and out on a regular basis allowing these opportunists access to the rafters. The solutions then boil down to basically three areas: (1) kill all the birds; (2) scare them away; or (3) exclude them from the hangar.

The purpose of this paper is to describe methods of controlling pest birds in these structures and some advantages and/or disadvantages of each. The author would like to thank Captain R.L. Wilson, USN, for his encouragement and editorial assistance. Thanks are also due to Captains D. Griggs, USNR-R and D. Horrigan, USNR-R, and Mr. T. Booth for their beneficial suggestions.

METHODS

Lethal Techniques

While it is easy to talk about killing birds, it turns out to be more difficult than it appears. Legally, feral pigeons, house sparrows and starlings are not protected under federal law nor is the author aware of any state laws protecting these species. Permits must be obtained for killing most other species of birds and are usually difficult, if not impossible, to obtain. Shooting birds may be sporting to some folks, but these species, especially starlings, soon become exceptionally wary. Thus, the project becomes very labor intensive after 1 or 2 days. There are also safety and public relation problems associated with live ammunition which are difficult to overcome. There are a few safe avicides registered (Martin and Martin 1982, Hall 1985), but poisoning birds is usually very difficult because, among other problems, they usually feed at several locations away from the roost site. Toxic perches may be effective with proper placement (Will 1985), but most of these structures are located in areas where reinvasion is highly probable. Trapping in or around hang-

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ars is sometimes successful. Decoy traps for starlings, funnel traps for pigeons, and pendulum traps or nest box traps for sparrows and starlings may be effective, especially for young birds. Trapping is time consuming and these species usually become trap shy after a few days.

Scaring Techniques

Scaring birds is an alternative but it is a time consuming process and only a short-term solution. A combination of amplified bird distress and alarm calls and pyrotechnic (exploding) devices is usually effective. Passive devices such as owl decoys, flashing lights, and rubber snakes are generally not effective unless accompanied by other scaring methods. While ultrasonic sound has been effective on rodents, the author is not aware of documented efficacy on birds. It is very difficult to scare birds under some conditions; i.e., active nests, snow or ice cover outside, areas where loud noises are common, etc. Logistical problems exist since the pyrotechnic devices cannot be used inside the hangar due to fire hazard. Also, the equipment needed to scare birds is very expensive to purchase; thus a source of loan equipment must usually be located such as the U.S. Fish and Wildlife Service. Scaring can normally be accomplished to give at least some relief. The major limitation with scaring or killing birds is that these solutions only offer short-term relief to the problem. They do nothing to change the long-term attractiveness or accessibility to birds.

Exclusion Technique

The best long-term solution is to exclude the birds from the hangar. This can be accomplished using plastic or nylon netting which is available from several commercial sources and fairly inexpensive (\$0.02 to \$0.05 per square foot for plastic netting excluding labor). The Air Force has been successful using two different techniques to secure the netting to the underside of the trusses of a hangar to keep the birds out of the overhead

(Pratt 1979). This is the best cure since it provides minimum interference with hangar use. Air Force testing has shown no increase in fire hazard due to plastic netting and little effect on the water pattern when their overhead deluge sprinkler system was tested. Another potential system is to hang the netting across the doors in sections from the top of the door frame (Gorenzel and Salmon 1982). It could then be rolled up and down on PVC pipe much like a bamboo curtain or pulled up in one large section. The major limitation of this system is that it must be rolled or pulled up and down each time an aircraft goes in or out of the hangar. Since the birds usually fly in and out in the upper one-third of the hangar door, some success with roosting birds has been obtained by using netting in the top part of the opening. However, nesting birds will usually find a way under the net. Some facilities have had success using sticky compounds to exclude the birds. These come in either liquid or paste formulations to be sprayed or applied with a caulking gun directly to the perch sites. Birds do not like the sticky texture and soon leave. Major limitations are high cost of both purchase and application, the great number of perch sites to be treated, and short duration of efficacy due to dust accumulation. There are several commercial sources for these chemicals; however, the author would only recommend them if netting cannot be used. A more permanent form of repellent is porcupine-like wires (Nixalite[®] and Cat Claw[®]). These are strips of sharp pointed wires that keep birds off ledges. These have been used successfully at some locations but are very expensive to purchase (approximately \$3.50 per foot excluding labor) and install. Again, the author would only recommend this if netting cannot be used.

While the potential for contracting any of the life-threatening diseases associated with the accumulation of bird droppings is not high, the sanitation, corrosion and morale problems usually warrant action. Bird proofing hangars is an involved process, but it

offers the best long-term solution to the problem.

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