

**BIRD STRIKE PREVENTION
AT HELSINKI-VANTAA AIRPORT**

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ABSTRACT

The paper gives first a brief view of the bird strike prevention at Helsinki-Vantaa airport in 1979-93. There have been many changes in the bird patrol, which has taken care of bird controlling under a local bird strike committee.

Consequences of the bird control project are then discussed on the basis of quantity and quality of bird strikes reported at the airport. The strike statistics have been divided into several separate categories. This makes the possibilities for statistical analyses scanty. However, there are indications to show that the development of bird strike prevention has continued into right direction.

(Keywords: Bird control, Strike statistics, Evaluation)

1.0 Introduction

Organized bird strike prevention at Helsinki-Vantaa airport, Finland's largest international airport, began in 1979 when a Bird Strike Committee was established. Thereafter a bird controlling unit, belonging to the fire department and working under the committee, has taken care of bird patrolling (Kuusela & Stenman 1979). The duty of the bird patrol is both bird control and monitoring of the occurrence of birds at the airport and its near vicinity. The bird patrol has published five reports about its activity in 1979-84. The most important results given in the reports have been referred to twice at BSCE meetings (Helkamo, Stenman & Vickholm 1982, Helkamo & Stenman 1984).

Five reports have also been published on the patrol's activity in the period of 1985-93. The last one of these (Lindberg, Piipari & Turtola 1994) emphasizes the importance of the project's operational part. However, the practical side of bird controlling will be discussed only briefly in the following because the main purpose of this paper is to evaluate the consequences of the project on the basis of quantity and quality of bird strikes reported at the airport.

2.0 Changes in the bird patrol

Before 1979, the airport's fire department was responsible for bird control at Helsinki-Vantaa. Mainly shotguns with either live or blank ammunition were used as a method. The new bird patrol was built up of volunteers who had to be bird watchers and preferably also students in biology. They were trained to become bird control "specialists" for the airport.

However, the use of volunteers was stopped in 1988, and the bird patrol duties were transferred to three firemen interested in birds. This task became their principal duty in addition to the service routine. Also long and difficult negotiations over the closing of a dump near the airport were now successfully completed as were the operations for filling ponds near the middle part of the main runway.

Bird controlling was thus gradually changed into routine work. From now on the bird patrol reduced the ornithological side of its work and concentrated on the operative bird control. It found that it was "appropriate to approach the birds to be dispersed in a way that allowed velocity, surprise and aggressivity in the work". So, in some instances also killing of birds with shotgun could be used in dispersal situations.

3.0 Consequences in the light of strike statistics

In practice, the control measures used have been directed only on medium-sized or larger birds, with the exclusion of flocks of some small passerines. Therefore, the main attention in the statistics is also drawn to strikes caused by at least medium-sized birds.

The accurate number of bird strikes in 1978-80 is unclear because primarily only cases that had caused damage to aircraft came to light (Fig. 1, period A). In fact, at that time pilots were not yet obliged to give a standardized report on the strikes. In 1981, however, the bird patrol already seemed to be taking well care of the dispersing.

The figures for 1982-87 include both the strikes reported by the pilots and the cases (in average 26 % of the strikes of this period) where the only evidence was a dead bird found on runway.

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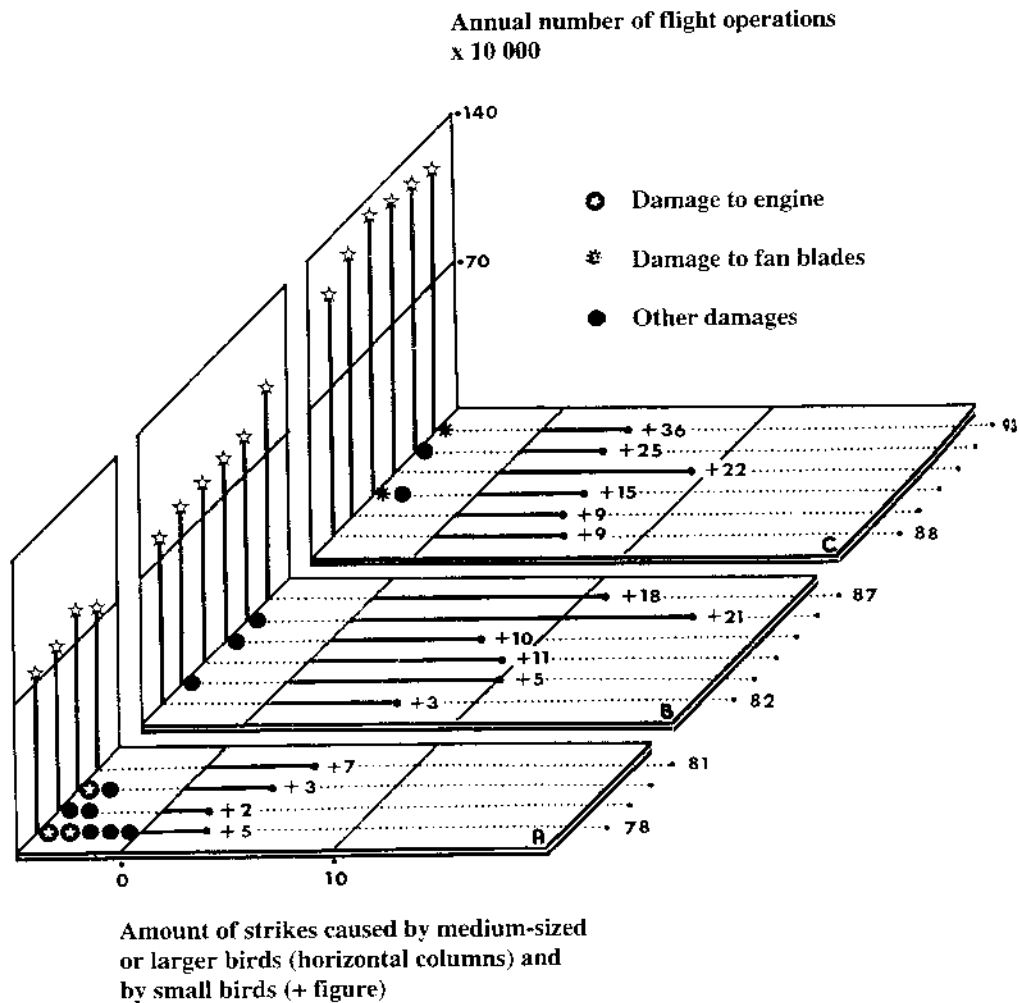
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Figure 1. Amount of flight operations and bird strikes at Helsinki-Vantaa Airport in 1978-93. **A** = a period when pilots were not obliged to give a standardized report on the strikes; **B** = the figures include both the strikes reported by the pilots and the cases where the only evidence was a dead bird found on runway; **C** = only strikes reported by pilots. The quality of damages caused by the strikes is shown by symbols.

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