

BIRD HAZARDS AND AIRCRAFT

In an era of supersonic flights and highly sophisticated gadgetry, the world's airlines are still at the mercy of birds. This hazard has existed since aviation began.

The first human fatality, caused by a collision between a bird and an aircraft, was recorded in 1912. Since then such collisions have increased to an average of 200 per year for the Canadian Armed Forces alone. The problem has become more acute in recent years, due not only to higher aircraft speeds and increased air traffic, but also to the vulnerability of the jet engine.

To date, 60 is the largest number of deaths resulting from a collision between a bird and an aircraft. The monetary losses to airline companies due to a collision can be great, totalling in the millions of dollars. Research to reduce these losses has been concentrated in three areas:

- 1) Reducing the bird numbers in the vicinity of the airport where 70 to 80 per cent of the collisions occur.
- 2) Modification in aircraft design so that aircraft are better able to withstand collisions.
- 3) The detection of large bird groups by radar and subsequent diversion of aircraft from these areas.

In Canada, research on the second and third methods has been concentrated in the Ottawa area under the direction of the Associate Committee on Bird Hazards to Aircraft. Research on the problem in the United States has been carried out at the Bird Aircraft Strike Headquarters (BASH) in Florida.

The first method has received the greatest attention both throughout the world and in the Maritimes. Birds frequent airports in order to loaf, nest, roost or feed. Changes made to airports to reduce the

attractiveness of the airfields such as draining ponds, filling ditches, cutting trees, shrubs and hedgerows, have proved very effective. Chemical bird repellants and mechanical scaring tactics have met with some success. Biological predation techniques such as the use of trained hawks and falcons, or the introduction of foxes has been successful in some circumstances. Recent research studied methods of reducing the food sources through changes in the vegetational cover. Different vegetation often harbours specific insect and mammal species. When a plant cover, which harbours a low insect and mammal population or a population which is not being eaten by birds, is grown in the airport area, the birds have a reduced food source and often choose another area to frequent. Studies have shown that the mouse eared hawkweed, Hieracium pilosella fills the bill.

Mouse eared hawkweed provides cover for very few small mammals and only a low insect population. In addition, the insects, when present, seem to be protected from the birds by the flat leaves. The plant was tested at several airports in the Maritimes including CFB Summerside.

In the Maritimes, gulls seem to be the biggest problem. At CFB Greenwood Nova Scotia, where mouse eared hawkweed grows naturally, and where tracts were planted, almost no gull use was made of the airport.

At Seven Islands International Airport in Quebec a change in cover changed a situation of frequent bird strikes, and large numbers of gulls frequenting the airport to one where gulls were an infrequent occurrence.

At CFB Summerside the success of using mouse eared hawkweed to reduce gull population was limited due to the proximity of the ocean,