

Attempts to control the breeding population of
the Herring Gull (Larus argentatus) near
Copenhagen airport.

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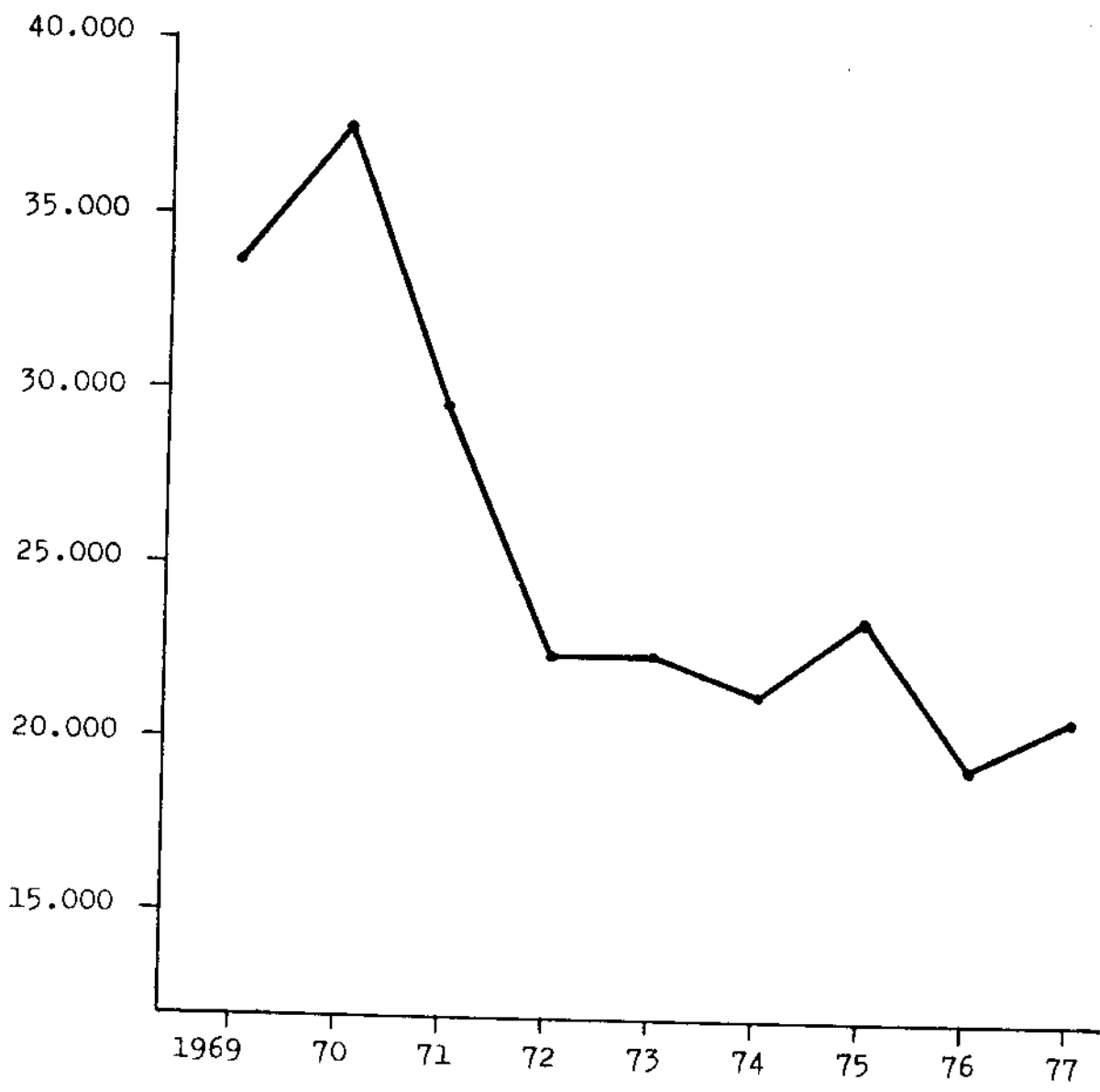
A. M. Glennung, Copenhagen Airport.

Gulls are the major problem in many airports. They usually breed in colonies, and if a colony is located near an airport, it may be necessary to reduce this local population. This is the case at the Copenhagen airport. The Herring Gulls breed in a large colony all over the island of Saltholm (1500 hectares) at a distance of only 5 km from the airport. In 1970 there were 38.000 pairs, and the number had been increasing for many years. The bird strike risk was above all due to the Herring Gulls, and it still is. During the period 1974 - Sept. 1977 a total of 333 birds (17 species) were recorded as killed in collisions with aircraft in the Copenhagen airport, 127 (38%) of which were Herring Gulls. By far the largest number of Herring Gulls are present in the airport during the breeding season, and observations on colour-marked birds indicate that all of them are breeding birds from Saltholm. Ring marking data indicate that even outside the breeding season most of the Herring Gulls are local birds.

In order to reduce the breeding population of the Herring Gull on Saltholm and to reduce the number of young birds leaving the colony, a control program was started in 1969 and it has continued since then. The eggs of the gulls are sprayed with a non-toxic difencryl oil emulgated in water, to which is added a blue dye. The method is, with some modifications, the same as used previously in USA (W.H. Drury & I.C.T. Nisbet: "Strategy of Management of a Natural Population: the Herring Gull in New England", World Conference on Bird Hazards to Aircraft, Kingston, 1969). The oil seals the pores of the eggs and the embryos die, but otherwise the eggs remain intact for about three weeks, and the birds continue brooding them. This is usually sufficient to prevent the production of a new clutch. An oil concentration of about 65% gives the best results, causing nearly 100% of the sprayed eggs to be killed. The nests of the colony must be treated twice during the breeding season. Other

breeding birds may benefit from the reduced number of adult and young gulls, but they may also suffer by the disturbances on the breeding grounds. It was attempted to minimize the disturbing effects. The number of Eiderduck nests was counted 1974-77. It was found that the Eiderduck population increased during this period from 3500 to 5500 pairs, and so there seems to be no harmful effect of the gull control program to this species.

The effect on the Herring Gull population on Saltholm: The spraying method has been very efficient in reducing the reproduction in the colony. Very few young become fledged, only a few hundreds each year. The development of the breeding population is shown in the diagram. There has been a 45% reduction of the population, but



Herring gull, Larus argentatus.
Number of breeding pairs on Saltholm 1969-77.

it seems difficult to reduce it further. It seems partly to be due to a high rate of immigration and partly to the size of the colony and the island, and the optimal feeding conditions in the area. In order to accelerate the reduction of the population, killing of adults by using alfa-chloralosis started on a small scale and as an experiment in 1975. In this way 600, 1800, 3600 adult gulls have been removed from the colony during the last three years. Most gull colonies are smaller and more compact than is the case on Saltholm, and it may be easier to obtain good results of a control program in such places.

The effect on the bird strike rate: There are indications that the number of strikes with Herring Gulls have been reduced, but it is uncertain whether it is due to the reduced gull population or other measures taken against the gulls in the airport. The upper figures in the table show that during late summer strikes with young gulls of all species are much more frequent than strikes with adults, in spite of the fact that the population contains more adults than young birds. Thus, the inexperienced young birds seem to be more dangerous than adults. We should expect the same as to the Herring Gulls in Copenhagen airport, but as shown by the lower figures of the table, strikes with young Herring Gulls are relatively rare in this airport during the same period. This is a strong indication that the reduced reproduction in the colony on Saltholm has in fact reduced the number of bird strikes in the airport.

The number of gull strikes in Danish civil airports during the period 1/7 - 15/9, 1974-77.

	Adults (older than one year)	Juveniles
All species of gulls (except <i>L. argentatus</i> in Copenhagen airport)	19	37
<i>Larus argentatus</i> in Copenhagen airport	38	10

Our conclusion is that a local breeding population of gulls can be reduced to some extent (how much, apparently depends on a number of factors), and the relatively dangerous young birds of the population can be eliminated. But the needs and the reasons for actions against breeding colonies of birds in the vicinity of

airports should be carefully considered before such actions are started. We think that at least 4 conditions should be made:

- 1) Actions against breeding birds outside the airport should be the last way out. In general, various ecological and ethological methods which can be used in the airport area should be preferred.
- 2) The species in question has to present a major bird strike problem to the airport.
- 3) It must be proved that it actually is the local population of the species which causes the problems.
- 4) The method which is chosen to control the population must be selective and should cause a minimum of disturbance to the breeding of other bird species. For this and other reasons the cooperation with ornithologists is important.