WORKING PAPER 27

DISTRIBUTIONPATTERNS OF GULLS AROUND SCHIPHOL AIRPORT AND LEEUWARDEN AIR BASE IN THE PERIOD AUGUST 1980 - APRIL 1981

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DISTRIBUTIONSPATTERNS OF GULLS AT SCHIPHOL AIRPORT AND LEEUWARDEN AIR BASE IN THE WINTER MONTHS UP TO APRIL 1981.

by

On two Dutch airfields, namely Schiphol Airport and Leeuwarden Air Base, gulls are among the most troublesome bird species. The Dutch Working Group for the Prevention of Collisions between Birds and Civil Aircraft (WVAVCL) therefore decided to make a literature survey in close co-operation with the Royal Netherlands Air Force. This survey is to contain the most important literature about some behavioral aspects and the distribution of gulls in the Netherlands, in so far as such is deemed essential to the bird strike problem, and about the combative measures used against gulls. This survey has been carried out in the first half of 1980 (2). A written report has been attached to this presentation.

As a result of the survey there appeared to be several gaps in the knowledge of gulls. Knowledge, among other things, of the distribution of gulls around both airfields (Schiphol and Leeuwarden) appeared to be defective yet. The WVAVCL decided to gather more information. So fieldwork for this investigation began in August 1980 and is expected to end in April 1981 (in order to cover one entire non-breeding period). The most numerous gulls on the areas were the Black-headed Gull (Larus ridibundus) and the Common Gull (L. canus); Herring Gulls (L. argentatus) were few in number. Lesser and Great Black-backed Gulls (L. fuscus and L. marinus) were very scarce.

Most of the fieldwork has not yet been sufficiently worked out, but a few preliminary results of part of the investigation (about roosting places) are already available and will be shown in this presentation. By following the gulls en route to the roosting places and observing the aggregations of gulls during the last hours of the day (till after dark) information was obtained about the roosting places and routes used by the gulls flying to the roosting places.

Because of a shortage of manpower it was not possible to carry out simultaneous counts at a number of roosting places.

A few preliminary results are already available and. Fig. 1 shows the pattern of roosting places around Schiphol, while fig. 2 provides similar information for Leeuwarden Air Base.

At the end of the day the gulls often used to assemble at meadows for a last feeding. These "last feeding possibilities" consisted of several

hundreds of gulls very busy foraging in a rather close group. These gulls flew away to the roosting place in groups of a hundred birds or more and their take offs were often initiated by overflying gulls.

The flightheight of the gulls depended largely on the distance to be covered by the gulls in order to reach the roosting places (max. app. 15 km.). This corresponds with the results found by Grant (1) and Suter (3). Upon arrival at the roosting place the gulls did not land in a normal manner, but tumbled down (just like geese). This behaviour could be clearly observed even at great distances. The only logical explanation of it (this behaviour probably requires more energy than a "normal" landing) seems to be that also as many gulls as possible are attracted. Ward & Zahavi (4) argued that at a roosting place birds can obtain information about good feeding areas. If this is the case, it will be advantageous to the gulls to attract as many birds as possible to the roosting place, which could be the explanation of the above-mentioned behaviour of the gulls.

In frostly weather the gulls roosting on lakes seemed to sleep both on ice and on water, in stormy weather they slept at the most quiet part of the lakes.

All permanent roosting places were situated on lakes (natural or man-made) or adjacent flooded country, exept for the roosting places in the tidal area along the Frisian coast.

Roosting places at runways (and on grassland) appeared to be of a temporary nature. From this the conclusion was drawn that some scaring-pressure exerted on these roosts might prove to be quite succesful. We believe that a further analysis of the roosting and feeding flights is required to enhance understanding of the gulls and to increase the alertness of air traffic controllers, while a more detailed research into roost scaring will undoubtedly produce a more effective bird control.

Bibliography:

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2. Kuyk, F. (1981). Literature survey of distribution and group behaviour of gulls in the Netherlands.
3. Suter, W. (1978). Roosting and feeding flights of black-headed gulls (Larus ridibundus) in the region of Zurich Airport. WP 19, Proc. 14th Meeting of [illegible]
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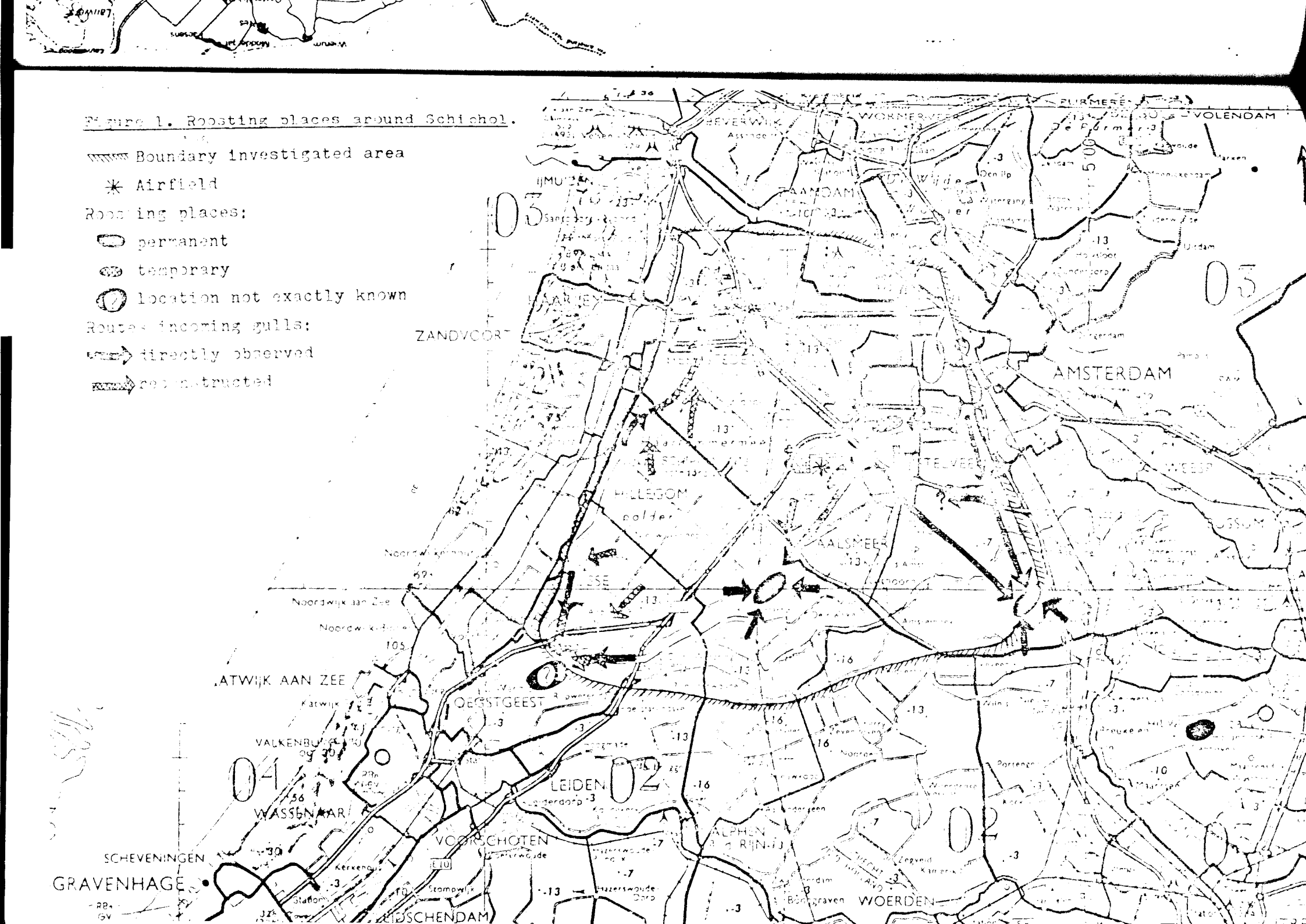

Figure 1. Roosting places around Schiphol.

Figure 2. Roosting places around Leeuwarden Airbase.