

Design of an Approach- or Bird-Hap for Single Airbases. By ORR Dr. Hild, GAF

For all German Military Airbases a precise biological and ecological analysis was ordered. This analysis extends on the climate, the soil, the hydrology, the birds and the vegetation. For the most important German Airbases this analysis was already made; the evaluations take up some months.

I shall give you some details about this analysis in order to explain how complicated are the various problems in the airfields.

Climate: The climatological conditions of the airfields are well-known since some years because they are worked up by my Institute. It is also known that seagulls are migrating into the country in case of strong storms and at mist and fog. We think, that the special weather conditions on the single airfields are very important for appearance of some birds and therefore we made special observations on some airbases.

The various movements of birds seem to depend not only on weather conditions but also on special meteorological parameters. The visual observation begins in early morning and is continued, if possible, during night by flight control radar. All observed swarms of birds are noted under indication of the actual weather conditions and the single meteorological parameters. I am sure, in future, we should be able to say under which weather conditions etc. there will be the greatest danger for flight safety by the birds. We start these observations in January 1968 and therefore we don't have any results till today.

The observations and investigations are carried out by the meteorological officer of the single airbases; evaluations by the Geophysical Advisory Service, GAF, Wahn.

Soil: Soil investigations like studies about chemical and physical state of soil under grassland, water-capacity and soil-quality are made to learn which mixtures of seed-corn will be the best with regard to the birds.

These investigations were carried out by the agricultural group of each airbase; special soil-investigations were made by myself (soil-profiles, water-capacity, soil-quality, pH etc.)

Hydrology: Investigations about precipitations but also about proportions or relationships between anorganic and organic substances in the soils will show if there is some danger or risk for inundations of the soil in case of strong precipitations so that waterfowls and limicols can invade for a short period.

These investigations base on the evaluation of climatological and soil investigations; moreover the hydrological status of the airbase is permanent observed by Flight Safety Officer, airbase-farmer and meteorological office.

Vegetation: These investigations extended on sociological studies on the airbases and in the neighbourhood. The investigations on which the single plant species in the grassland, the woods and other biotops were identified, served to learn

which special provisions will be necessary to prevent the birds from airfields. This sociological analysis can show the various weeds in grassland as well as the composition of woods which, in many cases, contain trees bearing fruit for bird-food.

These investigations were carried out by the biologist of German Air Force; 1-3 days per Airbase.

Birds: Since nearly 2 years we make bird observations ~~and investigations~~ on all German Airbases. The observations extend to the local birds as well as to the migrating birds.

The evaluation of the hitherto existing observations ~~and investigations~~ induced an approach- or vulnerability-map. In this map all areas are marked in which the most and largest swarms of birds invade. Moreover there are marked the times and routes of bird-migration or -movements. These indications contain the migration between feeding, sleeping and brooding place too. Also the ecological conditions in the airbase as well as in the neighbourhood were regarded so that Flight Control knows where and on which time there is given some danger by which birds. Besides this map which is only a design, we represent the bird invasions by diagrams and graphical plottings.

The bird observations are carried out by the weather observers of each airbase for 2 years permanent. This people were instructed about bird observation and got a small instruction-book with pictures.

