First experiences with seagull models at Zurich Airport

The airport of Zurich is situated in a plain between Kloten, Rümlang and Bülach. To the south, in a distance of about 11 km, there is the lower part of the lake of Zurich. To the northwest, in a distance of about 7 km, there is the reed of Neerach. These two areas which are offering ideal living conditions for different kind of birds are about 16 km apart - the direct line between the two sites is touching the airport area.

Today's airport territory was previously a swamp area and was used as an artillery shooting exercise field. Large areas of the land were ameliorated for the construction of the airport. Some areas falling under the national trust property were left in their natural condition.

Zurich Airport covers an area of 724 ha. In this zone the following kind of birds which are rare and therefore protected in Switzerland find ideal living conditions:

pheasants
snipes
quails
herons
owls
buzzards
kites
falcons.

According to our experience these birds have not presented a potential hazard to air traffic so far. However, during many years we have been experiencing bird strike problems with seagulls, peewits, starlings and pigeons. Seriousness and frequency of the bird strikes are in the order mentioned. Therefore, our main efforts were concentrated on the problems concerning seagulls.

The assembling of seagulls at Zurich Airport results out of the habit of these birds to fly to and from their sleeping area, the lake of Zurich, and the swamp area of Neerach, where they find ideal feeding conditions. On these daily flights and especially from the end of autumn until the beginning of spring they stop over at the airport area for feeding and, we assume, to rest on the warm ground. This assumption is based on many years of observation during which we could notice that the seagulls are using runways and taxistrips as resting areas. This habit inevitably leads to collision danger with aircraft landing and taking off.

As a first counter-measure carbide guns and pistols were fired to frighten the birds. The result was that the birds got uses to the shooting after a short time and even sat on the guns in operation. After this, various other means were applied:

- cries of distress of seagulls from tape recorder over loudspeaker
- high-frequency sounds, raised in intensity which were believed to be unbearable for the bird's ears.

The results werde disappointing - after a comparatively short time the seagulls also got used to these measures.

Shooting of the birds and removal of the carcasses showed no better results. After flying a wide circle the seagulls settled again on the same area.

Following this we were carrying out small experiments by shooting the birds and leaving the carcasses on the ground. The results were good. The birds avoided the areas where the carcasses were lying. Unfortunately the carcasses were soon removed by birds of prey and foxes. This experience let to the idea to produce and to use wooden models of seagulls. Immediately after shooting seagulls we took pictures served our people in the workshop to manufacture the models. Seen from the air the human eye cannot differenciate between a dead seagull and a dummy.

Flocks of seagulls in critical zones are being fired at by the gamekeeper. Afterwards, about 20 dummies are distributed over 1 to 3 ha. After this action the birds which were first frightened by the shooting move away to another site.
After 3 to 4 days the dummies are picked up again. This procedure is being repeated whenever necessary.

Since 3 years this system is being systematically applied at Zurich Airport and has proven to be quite successful. The cost of material is very low. The disadvantages of the system are

- it is rather time consuming
- it requires quite some manpower
- it cannot be applied on active runways and taxiways. However, when applied on the shoulders of the strips the system shows sufficient effect for the operational area of the airport.

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