20 th Bird Strike Committee
Europe. Helsinky

21 - 25 May 1990

EXPERIMENTS TAKING PLACE :

TESTS FOR THE FRIGHTENING AWAY OF BIRDS

BY MEANS OF A LASER GUN

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Among the breeds attracted to the apron, certain have turned out to be dangerous for aeronautical activity. The biological requirements of these breeds lead them to search out open spaces where there are no visual obstacles over long distances. These birds then frequent the open spaces of the active zones of aerodromes.

As a general rule, and whatever the activity happens to be, the bird or group of birds, are in a state of almost permanent vigilance.

Good eyesight allows the bird to react by flying away when aggressed, when the agressor comes within a certain limit. The distancing of this threshold measure the limit of the bird's safe distance. It depends on the open space in question and for each specimen its physiological state, its activity and how much it is accustomed.

In the case where aggression is detected by sight and which is then followed by avoidind action, set off by its reaction of flying away, the bird's survival depends essentially on the performance of the eye. Consequently, any diminishing of the visual functions can lead to a greater vunerability of the bird.

For certain breeds, looking for food necessitates visual detection. This means that any diminishing of their state of vigilance can also endanger their possibilities of finding food.

Taking these factors in consideration, the following theory has been evolued. Without causing pain, a disturbance by light impacts could affect the eye's performance. It would be detrimental to visual acuteness and to the maintaining of the state of vigilance. This would be considered as an agression to which the bird would react by flying away.

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The corollary, to this theory once prowed, is to use this form of disturbance (from a distance) to drive away the birds which are on te operational zones of the aerodromes.

With this aim, the TECHNICAL SERVICE OF AIR NAVIGATION has undertaken tests to frighten away birds by means of a laser gun.

EXPERIMENTATION

The object of the exercise is to prevent birds from staying in one particular place. For this, the impact of a laser beam is used to provoke the flight of the birds. Being dazzled, the bird can no longer locate the source of disturbance and perhaps, by this means, will free itself of the notion of a limit to its own safe distance.

The following breeds of common birds on french airfields have been used for testing : Lapwing, Black headed Gull, Herring Gull, Carrion Crow, Rook, Jackdaw, Magpie, Homing pigeon, Wood Pigeon, Common Buzzard, Black Kite, Kestrel, Starling.

Duration

As certain breeds are sedentary and others migratory, some for the winter period, others for the summer and some are just passing though, the tests will be carried out for the period of a year from March 1990. The results will be presented at the next meeting of the Bird Strike Committee Europe.

The Experimental process

There are two way for proceeding :

- either to drive about looking for birds to aim at ;
- or to wait, hidden in a look-out near a place where birds stop, which are then fired at once they have landed (in dead trees for birds of prey andcorvidae, on the ground for gulls and lapwing...).

In the more complex of the situations where the operator is working from a vehicle the order of operations is as follows :

1) Sight the birds with the help of binoculars.

2) Drive closer to the birds or group of birds.

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