

BIRD STRIKE COMMITTEE REPORT

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MIBRATING BIRDS AND THEIR DANGER TO AEROPLANES

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BIRD STRIKE COMMITTEE EUROPE

Migrating birds and their danger to aeroplanes

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The analysis of more than 1700 birdstrikes in the USSR civil aviation has shown the peaks in the periods of the spring and autumn migrations and in the summer - within the period of the young birds flight and of postnest nomadic phase. The comparison of the birdstrike rate at the southern airports, at the airports of the middle zone and at the northern airports in the European part of the USSR has shown that the wave of strikes comes from the South to the North in parallel with the spring migration wave. Comparison of these data with the seasonal distribution of flight intensity of the civil aviation planes shows that peaks of strikes are connected, in the first turn, with the general increase of birds number at airports during migration and as a result of reproduction. However at the series of airports the tremendous accumulation of settled birds - crows, jackdaws and others - do not represent any danger for planes. The adult migrating and settled birds local nesting at the airports (ducks, lapwings, pigeons, crows, jackdaws) strike with planes extremely seldom. When these birds appear at an airport - the process of fast learning to avoid strikes with planes apparently is taking place by birds. Generalizing the data obtained from the analysis of time of birdstrikes, and the age and species structure of victims we came to the conclusion that collisions occur with the birds who see for the first time a plane at close distance. First of all young, unexperienced, bad orienting birds are victims of strikes.

This conclusion bears direct relation to the selection and carrying out of measures for the prevention of bird strikes during migration:

1. The shooting and catching of both - birds migrating across an airport and the local nesting migrating and settled birds - are completely ineffective and inexpedient.
2. The most effective way is admittedly to create such a situation at airports which would be ecologically unattractive for birds in all aspects.
3. In connection with the fact that it is not always possible or economically justified to create ecologically unattractive situation at an airport - it is effective and expedient to use various means of active bird frightening : pyrotechnic, bioacoustic etc. These means frighten in the most effective way the migrating birds and young birds who appear at an airport for the first time and consequently who are most dangerous for planes.
4. The use, outside an airport, of the network of visual and radar observation posts makes it possible to notify airports at large space about the approach of the birds wave dangerous for flying

planes. On the basis of many years observations at the concrete point it is already possible to forecast mass bird migration in connection with meteorological and other conditions.

It seems to be expedient in the future to connect the adaptive peculiarities of the birds behaviour in flocks during migrations with the forecasting of the nature of mass migration during the day and in the night.