

Some proposals for evaluations of bird strike data

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SOME PROPOSALS FOR EVALUATIONS
OF BIRD STRIKE DATA

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Summary

The paper emphasizes the importance of careful evaluation and interpretation of statistical data. With respect to recent comparisons of the strike rates at different airports it is proposed, that, if airports are to be compared, the data should be based on the strike rates of individual operators. Conclusions should only be drawn if the results of different operator show a similar pattern.

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INTRODUCTION

Publications like "Analysis of Bird Strikes Reported" (Thorpe 1984, BSCE/WP17) try to evaluate the available data as carefully as possible. In spite of the many precautions taken they are biased in different ways. Some of the distortions are not harmful but others are dangerous. It is not bad for our purpose that collisions of large birds are overestimated compared to those with small birds; it is not so important that strikes off the airports are underestimated compared to those on or close to airports. However it is dangerous when some airports are blackmailed by high numbers or rates of strikes, if these do not correspond to reality.

Thorpe's 1984 papers give strikes rates per country. Most are below 3 per 10,000 movements. Germany showed up with 8.7 Switzerland had by far the highest rate with 10.5 strikes per 10,000 movements. Thorpe indicates that "although each country is reporting strikes world-wide, a high proportion of its aircraft movements are within its own country and its record will thus be affected by its own birdstrike problem".

This last conclusion, however, covers only a minor part of possible explanations. It is not stressed at that time that the strike rate per country reflects primarily the effectiveness of reporting systems of that country: 10.5 strikes per 10,000 movements is nearly equal to the strike rate of Swissair world-wide.

The result of the 1984 analysis showed an even worse picture when the strike rate of national airlines was related to selected airports. Both Swiss airports Zurich and Geneva, were far at the top, what is again the result of the efficiency of SWISSAIR reporting system.

The only possibility to avoid such misleading results is the evaluation of strike data per operator. The result of SWISSAIR strike data of the years 1985/86 are an example of how to do it. They show clearly that doing the analysis by operator puts the Swiss airports well within the range of other airports.

Very high rates come out for Rome and Amsterdam. At this point we have to avoid another quick and possibly wrong conclusion. Only when other within operator analysis show the same general pattern, conclusions can be drawn and measures proposed.

The conclusion is, that, for a valuable comparison of different airports it is necessary to have evaluations per operator, giving the strike-rates of these operators per airport. This special evaluation implies, that the number of movements for the airports in question are given by such operator. For airports with low numbers of movements figures should only be given covering several years, so that at least 1,000 movements are reached. Otherwise overrating of rare events could again lead to misleading interpretations.

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