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USING BIRD STRIKE DATA TO MONITOR BIRD-HAZARD CONTROL

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(22) USING BIRD STRIKE DATA TO MONITOR BIRD-HAZARD CONTROL

Thomas C. Kelly¹, Ray Bolger², Gavin Fennessy¹, Michael J. A. O'Callaghan³, Sorcha Sheehy¹, and Patrick D. Bourke⁴, ¹*Department of Zoology, Ecology and Plant Science, National University of Ireland Cork, Ireland;* ²*Dublin Airport Authority, Dublin Airport, Dublin, Ireland;* ³*Department of Applied Mathematics, National University of Ireland, Cork, Ireland;* ⁴*Department of Statistics, National University of Ireland, Cork, Ireland.*

An effective definition of a bird strike is the basis for quantifying the scale of bird hazard problems. Here we present a working definition of a bird strike, which in turn forms the basis of an analysis of 32 years' data collected at Dublin Airport, Ireland. A variety of datasets are analysed including the number of bird strikes per ten thousand aircraft movements, the mass of the bird species being struck, the time of year at which bird strikes occur and the dimensions of the aircraft utilising the airfield. In addition, we have analysed the mean number of strikes per year and the mean number of birds struck per bird strike. Following a very serious incident involving a Boeing 737-200 which struck a flock of gulls in the mid -1980's, a new regime of control measures was put in place. Therefore our study permits us to evaluate the effectiveness of this management programme. The results suggest that the most significant impact of control measures is to reduce the number of birds being struck per bird strike.