

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

2002 Bird Strike Committee-USA/Canada, 4th Annual Meeting, Sacramento, CA

Bird Strike Committee Proceedings

October 2002

Effects of Location and Phase of Flight on the Behavioral Responses of Birds to Aircraft: Preliminary Observations

T. C. Kelly

National University of Ireland Cork, Ireland

M. J. A. O'Callaghan

National University of Ireland Cork, Ireland

P. D. Bourke

National University of Ireland Cork, Ireland

L. Buurma

Royal Netherlands Airforce, P.O. Box 20703, 2500ES Den Haag, Netherlands

R. Bolger

Dublin Airport, Dublin, Ireland

Follow this and additional works at: https://digitalcommons.unl.edu/birdstrike2002



Part of the Environmental Health and Protection Commons

Kelly, T. C.; O'Callaghan, M. J. A.; Bourke, P. D.; Buurma, L.; and Bolger, R., "Effects of Location and Phase of Flight on the Behavioral Responses of Birds to Aircraft: Preliminary Observations" (2002). 2002 Bird Strike Committee-USA/Canada, 4th Annual Meeting, Sacramento, CA. 34.

https://digitalcommons.unl.edu/birdstrike2002/34

This Article is brought to you for free and open access by the Bird Strike Committee Proceedings at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in 2002 Bird Strike Committee-USA/Canada, 4th Annual Meeting, Sacramento, CA by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Effects of Location and Phase of Flight on the Behavioral Responses of Birds to Aircraft: Preliminary Observations

T. C. Kelly, Department of Zoology and Animal Ecology, National University of Ireland Cork, Ireland

M. J. A .O' Callaghan, Department of Applied Mathematics, National University of Ireland, Cork, Ireland

P. D. Bourke, Statistics Department, National University of Ireland, Cork, Ireland

L. Buurma, Royal Netherlands Airforce, P.O. Box 20703, 2500ES Den Haag, Netherlands

R. Bolger, Aer Rianta, Dublin Airport, Dublin, Ireland

Based on an earlier classification of avoidance movements shown by birds to moving aircraft (Kelly et al. 2001), we have studied the evading maneuvers of the rook (Corvus frugilegus) in relation to the phase of flight of air traffic at Dublin Airport, Ireland. The percentage of individuals which did not show avoidance movements was almost identical for approach/landing and take-off /climb-out movements. However, the nature of the avoiding-response in relation to the phase of flight was different. Thus 78% of responses were "Simple" in the approach/landing flight phase whereas only 5% were in this category during take-off. On omitting the approach data, the difference between take-off and landing was less marked with only 18% being "Simple" in the latter. In the case of the energetically costly "Noose"-type avoidance maneuver, 23% of rooks showed this response to aircraft on take-off as compared to 13% that were landing. Interestingly while "Protean"-type responses were relatively infrequent, they appear to occur with equal frequency during both landing and take-off movements. Recent evidence suggests that there are marked "Protean"-type responses by woodpigeons (Columba palumbus) to ascending aircraft during climb-out. These findings are discussed in relation to the numbers of birds present in the different phase of flight zones on the airfield, seasonal factors, and inter-specific differences in the nature and extent of the avoidance responses.